# Project System (PS)

ADDON.IDESPS

**Release 4.6C**

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## Icons

| Icon | Meaning |
|---|---|
| | Caution |
| | Example |
| | Note |
| | Recommendation |
| | Syntax |

## Typographic Conventions

| Type Style | Description |
|---|---|
| *Example text* | Words or characters that appear on the screen. These include field names, screen titles, pushbuttons as well as menu names, paths and options. |
| | Cross-references to other documentation |
| **Example text** | Emphasized words or phrases in body text, titles of graphics and tables |
| EXAMPLE TEXT | Names of elements in the system. These include report names, program names, transaction codes, table names, and individual key words of a programming language, when surrounded by body text, for example, SELECT and INCLUDE. |
| `Example text` | Screen output. This includes file and directory names and their paths, messages, names of variables and parameters, source code as well as names of installation, upgrade and database tools. |
| **Example text** | Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation. |
| **<Example text>** | Variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries. |
| `EXAMPLE TEXT` | Keys on the keyboard, for example, function keys (such as `F2`) or the `ENTER` key |

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# Project System (PS)

Preparations [Page 387]

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Easy Cost Planning and Execution Services for an IT-Project [Page 46]

Ad-hoc Cost Estimate Using Easy Cost Planning [Page 61]

Engineer-to Order (ETO) of a Turbine [Page 69]

Constructing a Power Station [Page 158]

Make-To-Order Production of Elevators [Page 292]

Period-End Closing for a Customer Project [Page 359]

Evaluating the Project Data in the Business Information Warehouse [Page 374]

Invoicing a Project Using Down Payment Processing [Page 383]

Engineer-to-Order with Planning of Production Lots (SEIBAN) [Page 404]

Make-To-Order Production With Pre-Planned Production Lots (SEIBAN) [Page 424]

Repetitive Manufacturing with Planning of Production Lots (SEIBAN) [Page 439]

# Preparations

The descriptions of objects in the Project System do not exist in multiple languages. For this reason, you should now execute a one-time Automatic Translation [Page 15] into the language you require.

# Automatic Translation

## Use

Not all the objects used in IDES processes have short texts that can be created in multiple languages. The short texts for the following objects are maintained in only one language in the R/3 standard system, regardless of the language in which you have logged on:

- Standard project
- Standard network
- Routing
- Project
- Network

Order (production order, internal order)

However, if you want to use these objects for training and demonstrations, you can use the IDES language switch to save these short texts in multiple languages. The basis for this is a text pool that contains the short texts of selected objects in the IDES languages. You can set the IDES language switch for the language you require to replace the short texts of the specified objects. Note that this function supports only those objects for which multi-language maintenance of short texts is not available.

## Use

You always work with **one** language in your IDES system. If this is the case, you should use the language switch to overwrite the short texts of all objects with relevant short texts in the target language.

## Procedure

1. Enter transaction code **`YILA`** to access the transaction.

   If you are calling up the language switch for the first time, a dialog box appears. It contains a short description of the tool.

   If you select the *Do not display dialog box any more* check box, this dialog box will no longer be displayed on future occasions.

2. Choose *Language switch*

   The short text update screen appears. The screen is divided into two areas. The steps that follow refer to the upper area of the screen.

3. Enter the target language in the *Target lang.* field.

4. Choose *Update short texts.*

   The system displays a message when the function is complete.

5. Choose until you see the overview tree.

**Automatic Translation**

## Usage

It is possible in your IDES System for different employees to work in different logon languages. This means that each employee can overwrite the descriptions of objects in a given application area (IDES process) in the required language.

## Procedure

1. Enter transaction code **YILA** to access the transaction.

   The short text update screen appears. The screen is divided into two areas. The steps that follow refer to the lower area of the screen.

2. Enter the desired language in the *Target lang.* field.
3. Enter the required text pool in the *Text pool* field.

   To choose from a list of the text pools maintained in the system, position the cursor in the text pool field and press F4. Choose .

   Names of IDES text pools begin with ZT-IDES.

4. Choose *Update short texts.*

   The system displays a message when the function is complete.

5. Choose until you see the overview tree.

# Adapting the Application Function Bar

## Use

Before using various functions, such as filters, in the project information system, you need to enhance the dynamic menu bar as required. The selected functions are then immediately available.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics or Accounting* → *Project System* → *Information System* → *Structures* → *Structure Overview* |
| **Transaction Code** | **CN41** |

2. If required, specify PS info profile `000000000001`, then choose .

   The *Project Info System: Structure Initial Screen* appears.

3. Enter the project definition in the *Project* field.

4. Choose .

   The *Project Information System* screen appears.

5. Choose *Choose Functions.*

   A selection screen appears.

   The left side of the screen shows all the functions that are available; the right side shows the ones selected.

6. Click the arrow to the left of *Set Filter*.

   The system lists the functions possible for the  icon

7. Position the cursor on the General function, press the left mouse button, and drag the cursor to the right side of the screen.

   When you release the mouse button, the system displays the selected function under the relevant icon.

8. Select the following functions in the same way:

| For Icon | Choose the Following Functions: |
|---|---|
| *Set Filters* | Status-dependent<br>User-defined |
| *Verify* | Create Confirmation Pool<br>Confirmation workflow |

9. Choose *Copy*.

   The system adds the selected icons to the menu bar. Click on an icon to list the functions selected for it.

You can now continue with processing or leave the report.

10. To exit the report, choose .

## Result

The system saves the settings on a user-dependent basis.The selected functions are available again the next time you access the structure overview or one of the individual overviews in the project information system.

# Information Technology Project (IT Project)

## Purpose

In this IDES process, you plan the conception and implementation of software for a new incentive wages system (NELLOS). This IT project involves:

- Usage of internal activities
- No material planning
- Budgeting

## Prerequisites

In the standard system, the descriptions in the Project System are displayed in the original language, regardless of the logon language. The IDES Language Switch lets you maintain these texts in multiple languages and to display them in the language you require. To display the project descriptions in your language, you must first carry out automatic translation [Page 15].

## Process Flow

You can find the data for this process under [Page 21]

1. To ensure that the project is successful, you need to define your project goals and structure the individual tasks that are required. To create and structure your project, you use the Project Builder. In the Project Builder you create WBS elements, which define the tasks. You also define activities, which control the process flow. To specify the time sequence of the project you define relationships between the activities.

   Creating the Project in the Project Builder [Page 22]

   Using Relationships to Link Activities [Page 26]

2. Project planning is a necessity for a successful project. Planning plays a crucial role in determining whether deadlines can be met, costs can be controlled, and internal activities can be fulfilled.

   Planning the Output and Duration of Activities [Page 28]

   Scheduling the Project [Page 30]

   Planning Costs [Page 32]

3. The planning phase has now been closed, and you can approve the project. As this is an internal project, with limited resources, you need to allocate a budget.

   Allocating the Budget [Page 34]

   Releasing the Project for Execution [Page 35]

4. During the execution of the project, you enter actual values using internal activity allocation and confirm the activities. To monitor the project, you check the deadlines in the project planning board and evaluate the project in the Information System.

   Confirming the Activities [Page 36]

   Actual Dates [Page 38]

   Entering Activity Allocation [Page 40]

Evaluating the Project [Page 41]

5. The project is not the final cost object. The costs are first collected on the project, before being further allocated to the final cost objects at period end. In this process, you first settle the actual costs incurred by internal activity allocation for WBS element "System Optimization" to cost center 4295. The system automatically generates the corresponding offsetting postings to credit the WBS elements.

   Storing the Settlement Rule [Page 43]

   Executing the settlement [Page 44]

# Data for this Example

| Field | Data | Description |
|---|---|---|
| Controlling area | 1000 | CO Europe |
| Company code | 1000 | IDES AG |
| Plant | 1300 | Frankfurt |
| Project profile | 0001 | IT project |
| Work Centers | PS01, PS02 | Work center PS01, PS02 |
| Cost centers | 4290, 4295 | Cost center 4290, 4295 |
| Activity type | 1421 | Labor |

# Creating the Project in the Project Builder

## Usage

The basis for all further planning steps is the work breakdown structure, which structures the project hierarchically. You now create WBS elements and activities for the NELLOS project using the Project Builder.

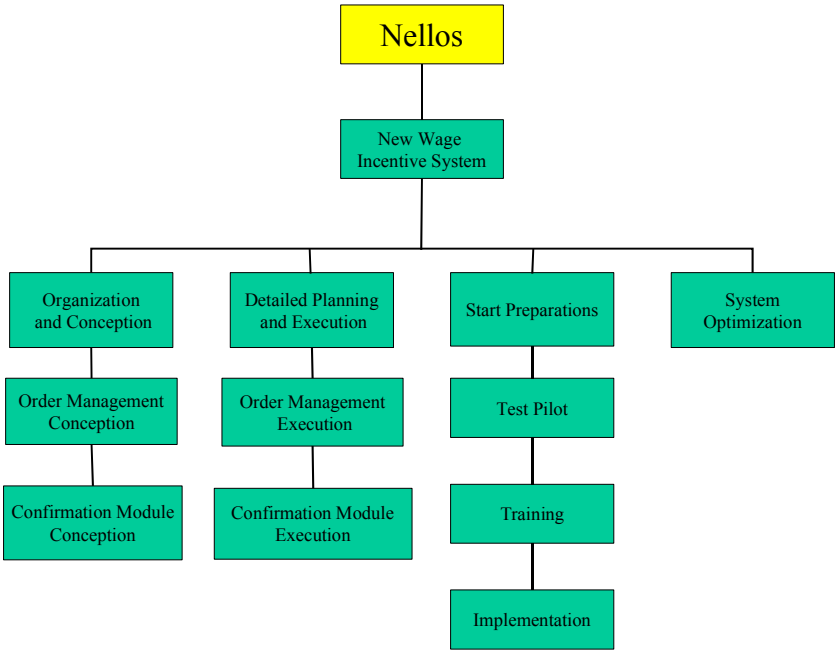
The Project Builder provides you with a user-friendly access into the Project System and integrates all of the user-specific functions you need to process the project. In the Project Builder, you can create, display, and process all the data of a given project structure.

The screen is split into three areas. At the top left, you see an overview of the structure of the created project (we refer to this as the structure tree). Beneath this, you see the worklist area and the template area. On the right-hand side of the screen, you see the work area.

For a detailed description of the available functions, see the standard documentation for the Project System, under *Structures* → *Project Builder*.

Project Builder [Ext.]

The following graphic illustrates the structure of the Nellos project.




## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Project Builder* |
| **Transaction Code** | CJ20N |

When you first call up the Project Builder, a dialog box appears that describes the user-specific settings you can choose to make. To maintain the user-specific settings, choose .

The *Project Builder: User-Specific Options* dialog box appears. In addition to the general settings, you can also define, for example, which project objects you would like to use as templates. Example: standard templates.

To see the previously edited project as a preview in the *Structure Tree*, select *Preview last project*, then choose . The Project Builder screen appears.

If you would like to modify your user-defined settings at any time, choose *Settings* → *Options*.

2. Choose *Templates*.

   In the *Templates* screen area, the system lists all of the templates for creating a new project or project element.

## Creating a Project

1. In the *Templates* screen area, expand the *Individual objects* if required.
2. Double-click *Project definition*.

   In the work area, the system opens the detail screen for the project definition.
3. In the *Identification and View Selection* screen area, enter the following data:

| Field | Data |
|---|---|
| Project def. | I# # # # and in the next field, enter Nellos as the short text<br># # # # can be any number, for example, 4563 |

4. On the *Control Data* tab page, in the *Project profile* field, use the F4 input help to enter *IT project*.

   The system copies the default values from the profile into the project definition.
5. On the *Basic data* tab page, enter the following data:

| Field | Data |
|---|---|
| Start | 10th (Current month +1). Year |
| Finish date | 10th (Current month +7). Year |

6. In the *Identification and View Selection* area, choose .

   The WBS element overview appears.

   The *Lev* column shows the hierarchy level of the WBS element within the project structure. The default value on this screen is always level 1.
7. Enter the following data:

| Lev. | WBS Element | Description |
|---|---|---|
| 1 | I/ # # # # or @ | New Incentive Wage System |

| | | |
|---|---|---|
| 2 | I/# # # #.1 or @.1 | Organization and Conception |
| 2 | I/# # # #.2 or @.2 | Detailed Planning and Execution |
| 2 | I/# # # #.3 or @.3 | Preparation for Use |
| 2 | I/# # # #.4 or @.4 | System Optimization |

@ is used as a placeholder for the project definition key.

8. Choose .

   The system prepares the numbers of the WBS elements and transfers the additional data from the project definition as default values.

   In Customizing for the project system, we have defined /0000-X-X-X-X as the format for the letter I.

   The structure tree of the Project Builder displays all project objects.

9. Choose .

## Detailing WBS Elements Using Activities

1. To call up your project, double click I### in the *Worklist* screen area.

   The system copies your project into the structure tree, as well as into the work area on the right-hand side of the screen.

2. To expand the project completely, choose .

   If the system does not display all icons in the *Structure Tree* screen area, you can enlarge the screen area or choose *Expand all* using the right mouse button.

3. In the *Structure tree* screen area, click the WBS element *Organization and Conception*.

   In the work area, the system displays the corresponding detail screen.

4. Choose in the *Identification and View Selection* area of the screen.

   You see an overview of the activities.

5. On the *Int. processing* tab page, enter the following data:

| Activity | Description |
|---|---|
| 010 | Order management conception |
| 020 | Confirmation module conception |

   You have now assigned the activities 0010 and 0020 to the WBS element *Organization and Conception*.

6. Repeat this detailing procedure for the following WBS elements:

| WBS Element | Through activity | Description |
|---|---|---|
| I/# # # #0,2 | 030 | Order management execution |

| | | |
|---|---|---|
| | 040 | Confirmation module execution |
| I/# # # #0,3 | 050 | Test pilot |
| | 060 | Training |
| | 070 | Implementation |

7. Choose .

   In the *Structure Tree* screen area, the system lists the activities under the relevant WBS elements. In line with the project profile settings, the system creates a network when the first activity assignment is made. The system initially assigns a temporary number to the network.

8. Choose .

## Result

The system creates the project and issues a number for the network. In the Project Builder, you can find the project in the *Worklist* screen area under *Last projects processed*.

To define the time sequence, you create the technical and content dependencies through the relationships.

Using Relationships to Link Activities [Page 26]

# Using Relationships to Link Activities

## Usage

Relationships determine the sequence in which the activities are to be carried out. You now enter FS (finish-start) relationships for your project, which means that the activities are carried out sequentially. You can maintain the relationships either directly in the Project Builder for the given activity, or in the network graphic.

In this case, you maintain the relationships in the network graphic and then check them in the Project Builder.

## Prerequisites

You have opened your project in the Project Builder [Ext.] and expanded it completely.

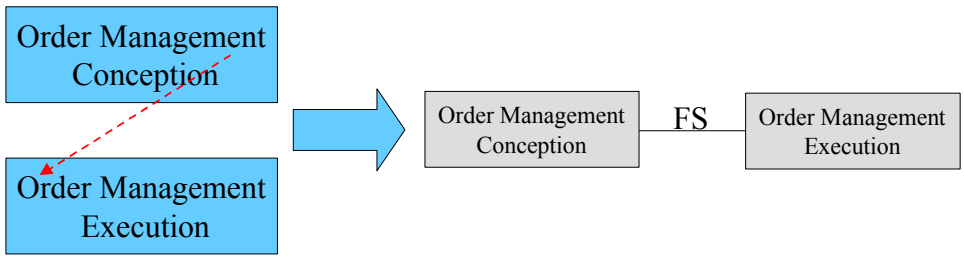
## Procedure

1. In the *Structure Tree* click on any activity.
2. Choose .

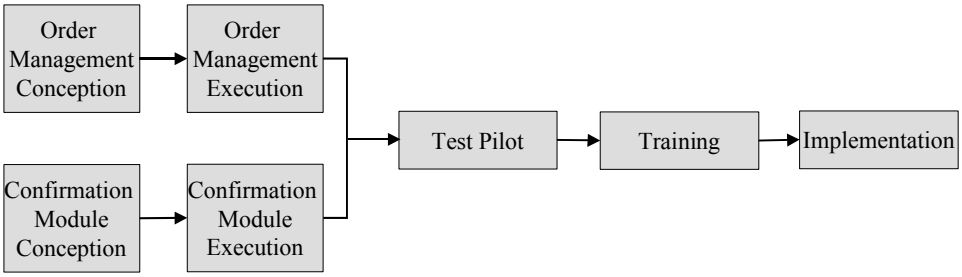
   The *Change Network: I/#### Basic Dates* screen appears. The network graphic shows all the activities you have created.
3. If you cannot see all the activities on the screen, choose .
4. Choose .

   The cursor takes on the form of a pencil.
5. Click with the left mouse button on the right half of *Order Management Conception*, then keep the mouse button pressed down and click the left side of *Order Management Execution*.

   The following graphic shows how you need to drag the line from *Order Management Conception* to *Order Management Execution* to create an FS relationship.




   The system displays the relationships using a line and the type of relationship, for example, FS (Finish Start).
6. Connect all of your network activities according to the following graphic.




If the system displays the regular cursor instead of the pencil, simply choose .

7. To align the graphic, choose .

   The *Confirm Activity* dialog box appears.

8. Select *Adjust complete graph*, then choose .

   The system displays the time sequence of the network.

9. Choose to return to the Project Builder.

10. In the *Structure Tree*, click the *Test Pilot* activity.

    In the *Work Area* you see the detailed view for the activity.

11. Choose in the *Identification and View Selection* area of the screen.

    The system branches to the relationship overview. Activity 0050 has the predecessors 0030 and 0040 and the successor 0060.

12. Choose .

## Result

You have now structured your project and defined the time sequence of the work steps. You can now plan the CO activities, costs, and dates.

Planning the Output and Duration of Activities [Page 28]

Scheduling the Project [Page 30]

Planning Costs [Page 32]

# Planning the Output and Duration of Activities

## Usage

To execute the project, you need to use various CO activities. For each of the individual network activities, you need to plan the necessary output (CO activity) and the duration required to execute the project. For each network activity you need to enter the:

- Work center providing the CO activity
- Work required for the CO activity
- Time required for the network activity (duration)

On the basis of the work that has been planned, the system calculates the costs involved. In the work center of the activity, you maintain the data relevant for the costing. The work center is assigned to a cost center, for which activity types have been planned. The network activity contains a costing key that is used for the overhead calculation. The system determines the costs using the activity type prices and the overhead rates that have been stored for the cost estimate.

Work center PS01 contains cost center 4230, activity type 1421 “Labor hours”, as well as a formula for calculating the costs of the internal activity (internal processing). For the overhead calculation, we have assigned costing key 13000 to the network activity using the network profile.

## Prerequisites

You have opened your project in the Project Builder [Ext.] and expanded it completely.

## Procedure

1. In the *Structure Tree* click Nellos.

   In the *Work Area* you see the detailed view of the network header.

2. Choose in the *Identification and View Selection* area of the screen.

3. In the *Activity Overview*, enter the following data:

| Activity | Normal duration | Unit | Work | Unit | Work center |
|---|---|---|---|---|---|
| 0010 | 10 | DAY | 50 | HR | PS01 |
| 0020 | 10 | DAY | 30 | HR | PS02 |
| 0030 | 10 | DAY | 30 | HR | PS01 |
| 0040 | 10 | DAY | 30 | HR | PS02 |
| 0050 | 10 | DAY | 50 | HR | PS01 |
| 0060 | 7 | DAY | 20 | HR | PS01 |
| 0070 | 10 | DAY | 20 | HR | PS02 |

4. Choose .

## Result

You have now defined the work and duration for the various activities. The system uses these data to calculate the costs incurred. In the next project step, you plan the dates for the whole project.

Scheduling the Project [Page 30]

# Scheduling the Project

## Use

In the project system you can plan various date types, such as basic dates and forecast dates. In this process, you plan basic dates only. To do this, you copy the scheduled dates of the activities into the dates of the WBS elements.

For more information about dates in the Project System, see the standard documentation for the Project System, under *Dates*.

Dates [Ext.]

To carry out the scheduling, you call up the planning board from the Project Builder. The project planning board provides you with an overview of the hierarchy and the sequence of your project.

It is subdivided into two areas:

- A table area with information about the objects (left side)
- A graphical representation of the scheduling situation (right side)

You can change the size of the individual areas by dragging the separator lines.

To enlarge or reduce the overall view, you can choose . To call up the legend for the project planning board, choose either or *Extras* → *Legend*.

For more information about the project planning board, see the standard documentation for the Project System, under *Structures* → *Project Planning Board*.

Project Planning Board [Ext.]

## Prerequisites

You have opened your project in the Project Builder [Ext.] and expanded it completely.

## Procedure

1. Choose .

   The project planning board appears. The project planning board offers you a graphical interface for the planning and monitoring of the dates of the WBS elements and activities.

2. Choose .

   The system selects all of the project objects.

3. Choose .

   The system uses the project start and finish dates as the basis for calculating and displaying the earliest and latest dates for the activities.

4. Choose *Edit* → *Select* → *WBS Elements*.

   The system selects only the WBS elements.

5. Choose *Edit* → *Reconcile dates* → *Copy scheduled dates*.

   The system copies the maximum dates (earliest start and latest finish) determined in scheduling for each activity and displays them as date bars in the WBS elements.

6. If required, you can adjust the WBS element dates by dragging the date bars.
7. To enter a date for the *System optimization* WBS element, position your cursor on the relevant line of the graphic and drag the date bar with the mouse.

   The system inserts the date bar.
8. Choose .

## Result

By planning the work required for the activities, you have also planned the dates and costs for your project. You have not assigned any activities to WBS element I/# # # # -4. You will manually plan costs for this WBS element.

Planning Costs [Page 32]

# Planning Costs

## Usage

You have already planned costs for your project by costing the activities. You have not assigned any activities to WBS element I/# # # # -4. You will manually plan the costs of this WBS element for current year using:

- Hierarchical cost planning

  Cost planning not dependent on cost elements

- Activity input

  Cost planning using the original cost elements based on the usage of given CO activities.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Project System* → *Financials* → *Planning* → *Costs in WBS* → *Overall Values* → *Change* |
| **Transaction Code** | CJ40 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project def. | I/# # # # |
| Version | 0 |

3. Choose *Cost planning*.

   The *Change Cost Planning: WBS Element Overview* screen appears. In the overview, you can enter the annual planned values. In a second column, the system displays the planned total. These are the costs calculated by the system for the network activities.

   To display the WBS element descriptions instead of the numbers, choose *Settings* → *Display options* and select the display option you prefer.

   If you wanted to see the calculated planned costs for the next year, you would choose .

4. For WBS element I/# # # # - 4 *System Optimization*, enter costs of EUR 5,000.00.
5. Select WBS element I/# # # # - 4 *System Optimization*, then choose *Activity input.*
6. If the *Set Controlling Area* dialog box appears, enter *1000*, then choose .
7. Enter the following data:

| Field | Data | Description |
|---|---|---|
| Sender cost center | 4290 | |
| Sender ActTyp | 1421 | |

| | | |
|---|---|---|
| Total planned consumption | 10 | Planned activity quantity in hours |

8. Choose .

   The system uses the planned prices of the activity types to calculate the costs.

9. Choose .

   The *Change Cost Planning: WBS Element Overview* screen appears. In the *Planned total* view, the system displays the costs of the activity input for WBS element I/# # # # - 4 *System Optimization*, in addition to the cost-element-independent costs (5,000 EUR). The cost element planning indicator is displayed.

10. Choose *Edit* → *Total up.*

11. In the dialog box, choose .

    The system adds up the costs, starting from the bottom of the hierarchy. In the left column, the system displays the manually planned costs, in the *Planned total* column it displays the total planned costs of the project.

    The cost planning is only correct if the planned values of the lower levels do not exceed the value of the higher levels.

    If you have maintained planned values over several years, enter the corresponding years in the *Total up* dialog box.

12. Choose .

## Result

You have planned costs for your project. You use this cost estimate as the basis of the budget allocation.

Allocating the Budget [Page 34]

# Allocating the Budget

## Usage

You copy all of the planned costs to use as your project budget.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project System* node, choose *Financials* → *Budgeting* → *Original Budget* → *Change* |
| **Transaction Code** | CJ30 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project | I/# # # # |

3. Choose *Original Budget.*

   In the *Planned total* column, you see the values copied from cost planning.

4. Choose .
5. Select the planned total column.
6. Choose *Edit* → *Copy view.*
7. In the dialog box, enter the following data:

| Field | Data |
|---|---|
| Percentage rate | 100 |
| Overwrite | Select |

8. Choose .

   The system copies the values from cost planning into the budget.

9. Choose .

## Result

You have now allocated a budget to your project, and you can begin the execution of the project. To do this, you need to release the project.

Releasing the Project for Execution [Page 35]

# Releasing the Project for Execution

## Use

The appropriate system status must exist for each of the business transactions you execute for your project For example, the system status *Released* must be set for WBS elements and activities before you can post actual costs to the project or confirm the actual dates.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Project Builder* |
| **Transaction Code** | CJ20N |

2. In the work list area, choose *Last projects processed*.

   The system displays the previous five projects you have processed.

3. Double-click your project.

   The system opens your project in the *Structure Tree* and in the *Worklist*.

4. Select project definition Nellos.

5. Choose *Edit* → *Status* → *Release*.

   In the work area, on the *Basic Data* tab page, the system displays system status *REL*. When you release the project definition, the system also release all of the lower-level project objects.

6. Choose .

## Result

You have now released all of the project objects, and you can begin the execution of your project.

Confirming the Activities [Page 36]

Checking the Actual Dates [Page 38]

Entering Activity Allocation [Page 40]

Evaluating the Project [Page 41]

# Confirming the Activities

## Usage

During the execution of the project, you record the project earned value by confirming the activities. The system uses the confirmed data to determine the actual costs and actual dates.

## Prerequisites

You have opened your project in the Project Builder [Ext.] and expanded it completely.

## Procedure

1. In the *Structure Tree*, click the network header Nellos.

   In the *Work Area* you see the detailed view of the network header.

3. Choose in the *Identification and View Selection* area of the screen.

   You see an overview of the activities.

3. Select activities 0010 and 0020.

4. Choose .

   The *Create Network Confirmation: Actual Data* screen appears for activity 0010. In the network profile, we have defined that the *FinalConf.* indicator should be set automatically. The system copies the work center, the activity type, and the planned data from the network activity data.

5. Enter the following data:

| Field | Data |
|---|---|
| Actual start | Earliest scheduled start date |
| Actual finish | Earliest scheduled finish date |
| Actual duration | Planned duration from the activity |
| Actual work | Planned work from the activity |

6. Choose .

   You now see the confirmation data for activity 0020.

7. Enter the following data:

| Field | Data |
|---|---|
| Actual start | Earliest scheduled start date |
| Actual finish | Earliest scheduled finish date |
| Actual duration | Planned duration from the activity |
| Actual work | Planned work from the activity |

8. Choose .

9. Choose .

In the status line, the system displays an information message.

## Result

The system uses the confirmation to determine the actual dates and the actual costs, before updating the values on the activity. The costs are totaled up within the project hierarchy. You can now evaluate the actual data in the project planning board.

Checking the Actual Dates [Page 38]

# Checking the Actual Dates

## Usage

You have confirmed the actual dates on the activities. You can now evaluate the dates graphically in the project planning board. You can call up the project planning board either directly, or from the Project Builder.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project* node, choose *Project Planning Board* → *Change Project* |
| **Transaction Code** | CJ2B |

2. Enter the following data:

| Field | Data |
|---|---|
| Project def. | I/# # # # |
| Plan.board prf | IT project |
| w. activities | Select |

3. Choose *Open Project*.

   The project planning board appears. The actual dates of the activities “Order Management Conception” and “Confirmation Module Conception” are displayed in a red date bar.

4. Choose .

   A dialog box appears.

5. Click *Planning board*.

6. On the *Settings* tab page, enter the following data:

| Field | Data |
|---|---|
| Basic dates | Select |
| Actual dates | Select |
| Earliest dates | Select |

7. Choose .

   The project planning board appears. In the diagram area, the system displays in a yellow date bar the actual dates from the confirmation of the activities 010 "Order Management Conception" and 0020 "Confirmation Module Conception".

   To call up the legend for the project planning board, choose  or *Extras* → *Legend*.

8. Choose  without saving your entries until the overview tree appears.

## Result

You have now checked the planned and actual dates in the project planning board. You can now evaluate your project in the Project Information System.

Entering Activity Allocation [Page 40]

# Entering Activity Allocation

## Usage

Your project has consumed internal activities, and you now use internal activity allocation to post the costs incurred to the WBS element. The system determines the costs using the prices of the activity types.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project System* node, choose *Financials* → *Actual Postings* → *Activity Allocation* → *Enter* |
| **Transaction Code** | KB21N |

2. If the *Set Controlling Area* dialog box appears, enter 1000, then choose .

   The screen for entering activity allocations appears. The system defaults today's date as the posting date.

3. In the lower screen area, enter the following data:

| Field | Data |
|---|---|
| Scrn variant | WBS element/network |

   In the lower part of the screen, the system displays the relevant entry screen for individual processing.

4. Enter the following data:

| Field | Data |
|---|---|
| Quantity | 30 |
| Unit | HR |
| Cost ctr | 4290 |
| Acty type | 1421 |
| Receiver WBS element | I/# # # #-4 |

5. Choose .

6. Choose until the overview tree appears.

## Result

You have entered the posting document and updated the actual costs on the WBS element.

Evaluating the Project [Page 41]

# Evaluating the Project

## Usage

In the structure overview of the Project Information System, you can evaluate the various project data. To define the scope of the evaluation, you select the fields to be displayed and define the PS Info Profile.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project System* node, choose *Information System* → *Structures* → *Structure Overview* |
| **Transaction Code** | CN41 |

2. In the *Enter Profile* dialog box, enter the following data:

| Field | Data |
|---|---|
| PS Info Profile | 000000000001 |

3. Choose .
4. Enter the following data:

| Field | Data |
|---|---|
| Project | I/# # # # |

5. Choose .
6. Choose → *Change Layout*.

   A dialog box appears. On the left side, you see the fields already selected, and on the right side you see the fields that are still available.

7. Press the Control key and choose the following fields from the right-hand list:
   - Actual costs
   - Actual work
   - Budget
   - Duration
   - Erl.start date (B)
   - Erl.finish date (B)
   - Finish date
   - Start date
   - Project cost sch
   - Work

6. Choose .

**Evaluating the Project**

The selected fields are copied into the selection list.

To change the sequence in which the fields are displayed, select the field you want to move, then double-click the field in front of which it is to be inserted. Use the arrow keys buttons above the lists.

To delete fields from the selection list, select the relevant field, then choose .

7. Choose .

   The system displays the structure and all selected fields.

8. To change the width of a column, click the edge of the column and drag the column to the desired width.

9. Choose until the overview tree appears.

10. In the dialog box, choose *No*.

## Result

You have now evaluated the values of your project.

During the lifetime of a project, you need to execute periodic tasks. For example, you need to settle the costs incurred to the final cost objects.

Storing the Settlement Rule [Page 43]

Executing the Settlement [Page 44]

# Storing the Settlement Rule

## Usage

The project is only a cost collector. The costs incurred are settled periodically to the final cost objects. In this process, you settle WBS element "System Optimization" at the end of each period 100% to cost center 4295. To do this, you must first define a settlement rule for the WBS element.

## Prerequisites

You have opened your project in the Project Builder [Ext.] and expanded it completely.

## Procedure

1. In the *Structure tree* screen area, click the WBS element *System Optimization* (I/####-4).

   In the work area, the system opens the detail screen.

2. Choose *Edit* → *Costs* → *Settlement Rule.*
3. Choose .
4. Enter the following data:

| Field | Data |
|---|---|
| Cost center | 4295 |

5. Choose .

   The System automatically inserts a settlement percentage rate of 100% and the settlement type “periodic settlement”.

6. Choose until the Project Builder appears.
7. Choose .
8. Choose .

## Result

During period-end closing, you credit the WBS element using settlement.

Executing the Settlement [Page 44]

# Executing the Settlement

## Use

During settlement, you allocate the actual costs incurred by internal activity allocation for WBS element "System Optimization" to cost center 4295. The system automatically generates the corresponding offsetting postings to credit the WBS element.

## Prerequisites

A WBS element has been maintained for the settlement rule.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Project System* → *Financials* → *Period-End Closing* → *Single Functions* → *Settlement* → *Individual Processing* |
| **Transaction Code** | CJ88 |

2. If the *Set Controlling Area* dialog box appears, enter 1000, then choose .

3. Enter the following data:

| Field | Data |
|---|---|
| Project definition | No entry |
| WBS Element | I/# # # #-4 |
| Settlement period | Current period (for example, 008 for August) |
| Fiscal year | Current year |
| Test run | Deselect |
| Detail list | Select |

Enter only the WBS element, and not the project definition.

4. Choose .

   The data are updated directly when you execute the settlement. You do not need to save the data separately.

5. Select your WBS element, then choose .

6. Select your WBS element, then choose .

   You receive additional information about the settlement.

## Result

The costs posted on the WBS element are settled to the cost center. For information purposes, the costs are still displayed on the project as statistiscal costs under the settlement cost element.

# Easy Cost Planning and Execution Services for an IT Project

## Purpose

You company wishes to implement new software. You are going to use the project system for this. Cost control is of prime importance. For simple and efficient cost planning you are using the Easy Cost Planning costing method. Your company has already implemented several projects of this kind, and consequently you are able to refer back to a standard project for the structure of the project and planning forms for the calculation of the costs. As the project progresses you use the Execution Services direct to cost various subsequent processes, such as purchase requisitions.

You can find a description of how you create planning forms in the process Ad hoc cost estimate with Easy Cost Planning [Page 61].

You can find a detailed description of the costing methods *Easy Cost Planning* and *Execution Services* in the standard SAP documentation under *Accounting* → *Controlling* → *Product Cost Controlling* → *Product Cost Planning*.

Easy Cost Planning and Execution Services [Ext.]

## Process Flow

You can find the data for this process under [Page 48]

1. Using the Project Builder create the project with the template for the standard project I/0002. Because cost control is of prime importance in this procedure, you map your project via a work breakdown structure without activities.

   Creating a Project with Template [Page 49]

2. You plan the costs of your project by using predefined planning forms. In the planning forms you specify the cost relevant factors (characteristics) and the conversion of these into the costing items of the unit costing. As planner you define the characteristics based on your project-specific data, for example number of licenses, and the system determines the quantities and prices of the costing items. This does not require a detailed knowledge of unit costing.

   Planning Costs using Easy Cost Planning [Page 52]

3. As planning proceeds you receive additional information about the project and make the planning complete.

   Changing Cost Planning [Page 54]

4. The planning is accepted and you release parts of the project for execution.

   Releasing the Project [Page 56]

5. In the further course of the project you trigger various subsequent processes (such as internal activity allocation) directly from the planning function.

   Carrying out Execution Services [Page 57]

6. To gain an overview of the cost process check the plan/actual position.

   Evaluating Costs in Reporting [Page 60]

# Data Used During This Process

| Field | Data | Description |
|---|---|---|
| Controlling Area | 1000 | CO Europe |
| Company Code | 1000 | IDES AG |
| Plant | 1300 | Frankfurt |
| Standard Project | I-0002 | IT Project Nellos |
| Planning Form | ZPS000 | Nellos |
| Planning Form | ZPS001 | IT: Concept |
| Planning Form | ZPS002 | IT: Implementation |
| Planning Form | ZPS003 | IT: Team Preparation |
| Planning Form | ZPS004 | IT: Prep. With External Consultants |

# Creating a Project with Template

## Use

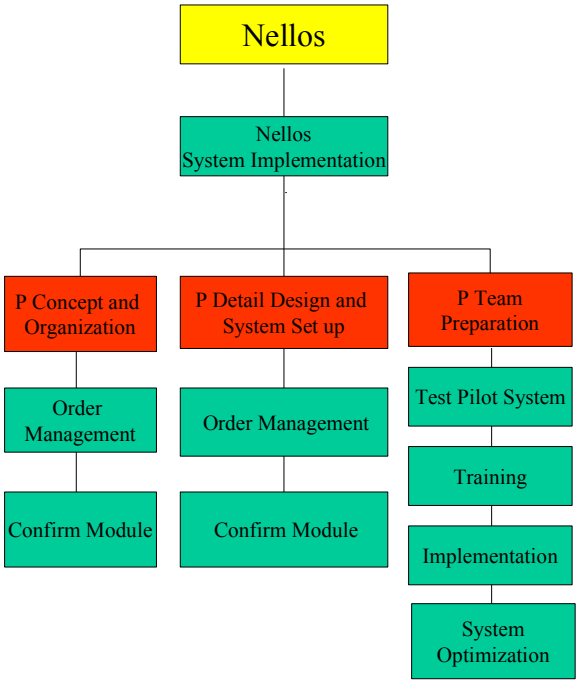
The organizational structure of the project results from the use of the work breakdown structure (WBS). You have already created a standard template during the initial system implementation phase, which you can use when you create the project using the Project Builder. The project is structured only by using WBS elements.

The Project Builder offers you a simple introduction to using the Project System and integrates all of the specific functions required to process the project. Not only can you maintain all of the data for a project structure in the Project Builder, you can also carry out Easy Cost Planning and trigger the Execution Services.

You can find a detailed description of the functions in the standard documentation for the Project System via *Structures* → *Project Builder*.

Project Builder [Ext.]

The following graphic shows you the structure of the project “Nellos”. The later cost planning is carried out for those WBS elements indicated as a planning element (P).




## Prerequisites

You have maintained the standard project I/0002 in your system.

## Procedure

3. Call up the transaction as follows:

| Menu path | *Accounting* → *Project System* → *Project* → *Project Builder* |
|---|---|
| **Transaction code** | CJ20N |

On first accessing the Project Builder a dialog window appears giving you information about the subsequent user-specific settings that need to be made.

4. To maintain user-specific settings, choose in the dialog box.

   The dialog box *Project Builder: User-specific options* appears. Here you can specify both the general settings and also which project elements you will need as templates, for example *Standard templates*.

   You can change the user-defined settings at any time by choosing *Settings* → *Options*.

5. If you want to preview the last project you edited in the screen area *Structure tree,* select *Preview last project* and choose .

   You access the Project Builder. The screen is divided into three areas: In the top left area you are given an overview of the structure of the project you have created (in the following structure tree). Beneath this is the worklist and template area. The actual work area is on the right side of the screen.

6. Choose in the screen area Structure Tree → *Copy Project*.

7. Enter the following data:

| Field | Data |
|---|---|
| Project definition | I/00XX<br>(where XX stands for any two figure number) |
| Project profile | Cost projects |
| Std. proj. def. | I/0002 |

8. Choose .

   The system creates the project and displays the structure in the screen area *Structure tree.* In the work area the system opens the detail screen for the project definition.

9. Under *Identification and view selection* in the work area add the project number I/00XX to the entry *Nellos system implementation*.

10. In the *Basic data* tab page, enter the following data:

| Field | Data |
|---|---|
| Start date | (The current date) |
| Finish date | The current date + 3 Months |

11. In the structure tree click on the WBS element *Concept and Organization*

    The system displays the detail screen in the work area. The WBS element is flagged as a planning element and an account assignment element (operative indicators).

12. Choose and select *Yes* for the warning message displayed.

## Result

The system creates the project. In the Project Builder you can find the project in the screen area *Worklist* under *Last projects processed.* In the following you plan the costs.

Planning Costs using Easy Cost Planning [Page 52]

# Planning Costs using Easy Cost Planning

## Use

As project leader you decide to plan your costs using Easy Cost Planning. To make the work easier you include the relevant planning form in your worklist. You then assign the corresponding planning forms to the planning elements of your project and define the characteristics.

## Procedure

1. Call up your project in the Project Builder by double-clicking on Project I/00XX displayed in the structure tree as a preview.
2. Choose .

   A dialog box appears with the predefined costing variant *PS06.*
3. Choose *Create Cost Estimate*.

   The screen *Easy Cost Planning* appears. The costing structure and the worklist are displayed in the left hand side of the screen. The system has transferred the project structure to the costing structure. The planning elements are indicated by .

   The right-hand side of the screen is the work area. In the lower screen area you find the item overview.
4. If the item overview is not displayed, choose *Show/Hide Item View*.
5. If the worklist in the lower left screen area is not displayed, choose .

### Including Planning Forms in the Worklist

1. In the screen area *Worklists*, choose next to the directory *My Planning Templates*.
2. Enter `ZPS00*` as a search term in the field *Costing model.*
3. Choose .
4. Select planning forms ZPS001 to ZPS003 and choose .

   The system transfers the planning forms to the screen area *Worklists*. If necessary change the width of the column to see the entire description.

### Assigning the Planning Forms to the Project Elements

1. In the screen area *Costing Structure* select the WBS element *Concept and Organization*.
2. Click on the planning form *IT:Concept* in the screen area *Worklists.*

   The system displays the entry screen with the characteristics for the planning form in the work area.
3. Enter the following data:

| Field | Data |
|---|---|
| Working Hours | 100 |

| | |
|---|---|
| Additional Costs | 2000 |

4. Choose *Confirm.*

   Depending on the data you entered the system determines the costing items using the planning form and displays them in the costing structure.

5. If you would like an overview of the meaning of the symbol legends displayed in the costing structure, choose in the application toolbar.

6. Similarly, assign planning forms to the following WBS elements:

| **WBS element** | **Planning form** |
|---|---|
| Detailed Design and System Set Up | IT: Implementation |
| Team Preparation | IT: Preparation |

7. Enter the following data:

| **In the planning form entry screen** | **Field** | **Data** |
|---|---|---|
| IT: Implementation | Internal Working Hours | 130 |
| | Number of Licenses | 50 |
| IT: Team preparation | Internal Working Hours | 90 |

8. Choose *Confirm.*

9. If you want to see the aggregate costs on the project, either change the column width as necessary in the screen area *Costing structure,* or increase the screen area.

10. Choose .

    You access the Project Builder.

11. Choose .

## Result

You have planned the project costs. Once you have received detailed information about the project, change the cost planning.

Changing Cost Planning [Page 54]

# Changing Cost Planning

## Use

You supplement the costing for the WBS element *Detailed Design and System Set Up* by two further costing items and change the values in the planning form entry screen *IT: Team Preparation.*

## Procedure

1. Call up your project in the Project Builder by double-clicking on Project I/00XX displayed in the structure area as a preview.
2. Choose .
3. In the costing structure select the WBS element *Detailed Design and System Set Up*.

   The system displays the entry screen of the assigned planning form in the work area.
4. If the item overview is not displayed, choose *Show/Hide Item View*.
5. To supplement the cost estimate choose twice in the item overview.
6. Enter the following data:

| Item cat. | Resource | Plant/Activity type | Quantity |
|---|---|---|---|
| E | 4295 | 1463 | 10 |
| M | B-1000 | 1000 | 10 |

7. Choose *Confirm*.

   You have supplemented the cost estimate by one internal activity (manager hours) and one material item.
8. In the costing structure select the WBS element *Team Preparation*.
9. Enter the following data:

| Field | Data |
|---|---|
| Internal Working Hours | 120 |

10. Choose *Confirm*.

    In the planning form you have a resource restriction of 100 hours of internal personnel time. Because you have scheduled more than 100 hours personnel time the system inserts an additional planning form in the costing structure. The items in planning form *IT: Team preparation* are removed from the costing structure.
11. Navigate in the screen area *Costing Structure* to the end of the structure.
12. Choose the *IT:Prep. With Ext. Consultants* node.

    In the work area the planning form entry screen is displayed.
13. Enter the following data:

| Field | Data |
|---|---|

| | |
|---|---|
| External Consultant Hours | 50 |
| Internal Working Hours | 70 |

14. Choose *Confirm*.

    The system transfers the costing items just determined to the structure.

15. Choose .

    You access the Project Builder.

16. Choose .

## Result

You have completed your planning and can release the project for implementation.

Releasing the Project [Page 56]

# Releasing the Project

## Use

Before you can post actual costs to the WBS elements you have to set the system status *Released.*

## Procedure

1. Call up your project in the Project Builder by double-clicking on Project I/00XX displayed in the structure area as a preview.
2. Click on the project definition in the screen area structure tree.
3. Choose *Edit* → *Status* → *Release.*

   In the work area on the *Basic Data* tab page the system displays the system status *REL Released*. By releasing the project definition you also release all of the subordinate project elements.
4. Choose .

## Result

All project elements have been released and you can begin with the implementation of the project. You use the Execution Services for this purpose.

Carrying out Execution Services [Page 57]

# Carrying out Execution Services

## Use

As the project progresses, you create actual costs for the costing items planned using Easy Cost Planning.

To make your work easier you trigger the required follow-up actions for the cost estimate via Execution Services direct. The system automatically selects the appropriate costing items with the required data. You normally only need to confirm the posting.

In this process you carry out the following Execution Services:

- Activity allocation for the internal personnel hours worked
- Goods issue for the office supplies taken from the warehouse
- Purchase requisition for the software licenses

## Prerequisites

You have carried out cost planning using Easy Cost Planning and released the project for the data to be posted.

## Procedure

1. Call up your project in the Project Builder by double-clicking on Project I/00XX displayed in the structure area as a preview.
2. Choose .

   The system displays the costing structure for the project.
3. If the item overview is not displayed, choose *Show/Hide Item View*.
4. Choose *Show Execution Services.*

   In the upper part of the screen you will see the checkbox *Execution Service*.

### Carrying out Internal Activity Allocation

1. In the costing structure select the WBS element *Concept and Organization*.

   The system displays the costing items.
2. Select the Execution Service *Internal Activity Allocation*.

   The system selects all of the costing items of category E (internal activity) and P (process costs manually), and displays them in the item area.
3. Choose .
4. Choose *Post*.

### Posting Goods Issue

1. Select the Execution Service *Goods Issue*.

   The system selects all costing items of category M (material items).

2. To supplement the posting data choose → *Layout* in the item overview.
3. Select Layout *1SAP02* and then choose .
4. Enter storage location 0001 for the item.
5. Select the item and choose *Post*.

### Create Purchase Requisition

1. In the costing structure select the WBS element *Concept and Organization*.
2. Select the Execution Service *Purchase Requisition*.

   The system selects all costing items of the following categories:

   – M (material)
   – F (external activity)
   – N (service)
   – V (variable items)
   – L (subcontracting)
3. To supplement the posting data choose → *Layout* in the work area.
4. Select Layout *1SAP05 Purchase Rquisition – Variable Item* and then choose .
5. For the item *Additional Costs Concept* enter the following data:

| Field | Data |
|---|---|
| Plant | 1300 |
| Delivery date | 14 days from today's date |
| Purchasing organization | 1000 |
| Material group | 014 |
| Purchasing group (PGr) | 001 |

6. Select this item and choose *Post*.

   The document is posted.
7. To display the document overview, choose in the upper right-hand of the work area.
8. To refresh the display, choose *Refresh*.

   The document for the purchase requisition is displayed.
9. Choose , until the overview tree appears.

   You do not need to save again. The system has already posted the document.

## Result

The activity allocation, the goods issue and the purchase requisition are posted and the actual costs or the commitment are updated on the project. Check the costs in reporting.

Evaluating Costs in Reporting [Page 60]

# Evaluating Costs in Reporting

## Use

You check the posting by cost element of the costs in the information system.

## Procedure

8. Call up the transaction as follows:

| | |
|---|---|
| **Menu path** | From the *Project System* node, choose *Information System* → *Financials* → *Costs* → *Plan-Based* → *By Cost Element* → *Actual/Commitment/Total/Plan in CO Area Currency* |
| **Transaction code** | S_ALR_87013542 |

9. Enter the DB profile 000000000001 if necessary.
10. Enter the following data:

| Field | Data |
|---|---|
| Project | I/00## |
| Plan Version | 0 |
| To Fiscal Year | The Current Year + One Year |

11. Choose .

    In the report the aggregated plan costs and the commitments and actual costs arising from the Execution Services are displayed.

12. In the structure tree click on the WBS element *Concept and Organization.*
13. In the report place the cursor on the column *Actual* and choose .

    You access the overview of the actual line items.

14. To display the document, select it and choose .
15. To leave the report keep choosing and choose *Yes* each time in the dialog box.

# Ad Hoc Cost Estimate using Easy Cost Planning

## Purpose

For a quick cost simulation of frequently used planning objects you can use an ad hoc cost estimate. This kind of cost estimate does not need a reference object. The basis of the cost estimate is the planning forms of Easy Cost Planning. You can create your own planning forms to suit your requirements.

You can find a detailed description of Easy Cost Planning in the standard SAP documentation under *Accounting* → *Controlling* → *Product Cost Controlling* → *Product Cost Planning*.

Easy Cost Planning and Execution Services [Ext.]

In addition to ad hoc cost estimates, you can use Easy Cost Planning to plan the costs of the following objects:

- Internal orders
- Projects
- Investment measures

You can use the planning forms created in this process for the cost planning of these objects.

**See also:**

Easy Cost Planning and Execution Services for an IT Project [Page 46]

## Process Flow

You can find the data for this process under [Page 62]

1. The costs are to be calculated for the initial work preparing your team of consultants. To do this, you in your capacity as the cost accountant create a suitable planning form.

   Create New Planning Form [Page 63]

2. Because as yet no project, internal order or investment measure has been created in the system at the cost planning stage for the team preparation, you simulate the planned costs of your team of consultants in the ad hoc cost estimate.

   Creating Ad Hoc Cost Estimates [Page 67]

# Data for this Example

| Field | Data | Description |
|---|---|---|
| Controlling Area | 1000 | CO Europe |
| Company Code | 1000 | IDES AG |
| Plant | 1300 | Frankfurt |
| Planning Form | ZPS004 | IT: With External Consultants |

# Creating a New Planning Form

## Use

To calculate the costs of getting your team ready for the job you create a planning form. Such costs depend on the planned consultant hours. To ensure you are adequately resourced, you specify that for more than 100 consultant hours external employees are to be used for the work. The additional costs incurred are also to be included in the cost estimate.

You assign characteristics to the planning form. You specify in the derivation rules (template):

- Which resources are to be included for the cost estimate
- How the characteristics affect the resources required and their quantities
- The conditions for including the items

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu path** | Via the project system:<br>*Logistics* → *Project System* → *Basic Data* → *Templates* → *Models for Easy Cost Planning*.<br>Via Product Cost Planning:<br>*Accounting* → *Controlling* → *Product Cost Controlling* → *Product Cost Planning* → *Easy Cost Planning & Execution Services* → *Edit Ad Hoc Cost Estimate*. |
| **Transaction code** | CKCM |

2. Enter controlling area 1000 as necessary and choose ✔.

   The screen *Easy Cost Planning: Model* appears. The left-hand side contains the *Worklists.* The right-hand side of the screen is the work area for planning form maintenance.

3. Choose in the work area.

   The dialog box *Create Model* appears.

4. Enter the following data:

| Field | Data |
|---|---|
| Costing Model | ZXXX<br>(where XXX stands for any three figure number) |
| Name | XXX IT: team preparation |

5. Choose ✔.

   The system displays the various steps in model maintenance in the work area. You choose the process step *Assign characteristics to the model*.

   In the lower work area you will see the list for maintaining characteristics.

## Creating a New Planning Form

### Assigning Characteristics

1. Enter the following data:

| Field | Data |
|---|---|
| Characteristic Name | PS_PERS_HOURS |

2. Choose .

   Because the characteristic has already been maintained, the system transfers the characteristic data.

### Creating Characteristics

1. Enter the following data:

| Field | Data |
|---|---|
| Characteristic Name | Z_XXX_Zusatz |

2. Choose .
3. Choose *Yes.*

   Because the characteristic has not yet been maintained in the system, the characteristics maintenance screen appears.

4. In the *Basic data* tab page, enter the following data:

| Field | Data |
|---|---|
| Description | Additional costs (Euro) |
| Format:<br>Data Type | <br>Numeric format |
| No of Chars | 8 |
| Decimal places | 2 |

5. Choose .

   You return to the screen *Easy Cost Planning: Model*.

### Defining Derivation Rules

1. Click on the node *Define the derivation rules (template)*.

   The dialog box *Selection of Reference Object* appears. Select the reference object *All objects.* The planning form can be used for projects, internal orders, investment measures and ad hoc cost estimates.

2. Choose .

   The *Create Template* screen appears.

3. In the first row, enter the following data:

| Field | Data |
|---|---|
| Type | Cost Center/Activity Type (use poss. entries) |

| | |
|---|---|
| Name | Internal Consulting Hours |
| Object | Using possible entries:<br>Cost Center: 4120<br>Activity Type: 1412<br>Name DV Service<br>Select by double-clicking on the entry in the results list for the year 2000 |
| Quantity | PS_PERS_HOURS |

4. In the second row enter the following data:

| Field | Data |
|---|---|
| Type | Variable Item (use poss. entries) |
| Name | Additional Costs |
| Object | Using possible entries:<br>Cost Element: 466000 |
| Quantity | 1 |
| Activation | Active (use poss. entries) |
| Price | Z_XXX_ZUSATZ |

5. In the third row, enter the following data:

| Field | Data |
|---|---|
| Type | Costing Model (use poss. entries) |
| Name | IT: With External Consultants |
| Object | Using possible entries:<br>Costing Model: ZPS004 |

The variable costs are included in the cost estimate in every case.

6. Choose .

### Setting Conditions

1. Double-click on the *Activation* column in the row *Internal consulting hours*

   You access the method editor in which you specify the conditions for including an item in the cost estimate.

2. Choose *Insert condition*.

   The *Create Template Z_XXX*. screen appears.

3. Enter the following data:

| Field | Data |
|---|---|
| Comparison operand 1 | PS_PERS_HOURS |
| Comparison | ≤ Less |

| | |
|---|---|
| Comparison operand 2 | 100 |

4. Choose *Confirm*.
5. Choose .
6. Double-click in the row *IT: With External Consultants* in the column *Activation*, and then choose *Insert condition* in the method editor.
7. Enter the following data:

| Field | Data |
|---|---|
| Comparison operand 1 | PS_PERS_HOURS |
| Comparison | > Greater |
| Comparison operand 2 | 100 |

8. Choose *Confirm*.
9. Choose .
10. To save the derivation rules, choose .
11. Choose .
12. To save the planning form, choose .

# Creating Ad Hoc Cost Estimates

## Use

As the person responsible for costs you simulate the costs of preparing to use your team of consultants using the ad hoc cost estimate. For this you use the planning form ZXXX that you created in Controlling.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting → Controlling → Product Cost-Controlling → Product Cost Planning → Easy Cost Planning & Execution Services → Edit Ad hoc Cost Estimate* |
| **Transaction Code** | CKECP |

2. Enter the controlling area 1000 if necessary.

   The screen *Ad Hoc Cost Estimate* appears.

3. Enter a suitable text in the field *Description.*

4. In the *Create with planning form* tab page, enter the following data:

| Field | Data |
|---|---|
| With Planning Forms | ZXXX the planning form that you created |

5. In the *Additional data* tab page, enter the following data:

| Field | Data |
|---|---|
| Costing Variant | PADH |
| Company Code | 1000 |
| Plant | 1300 |

6. Choose *Create*.

   The screen *Ad Hoc Cost Estimate: Change* appears. On the left-hand side of the screen the costing structure is displayed, and on the right side the entry screen for the planning form.

7. Enter the following data:

| Field | Data |
|---|---|
| Internal working hours | 110 |
| Additional cost (Euro) | 5000 |

8. Choose *Confirm*.

   Depending on the data you entered the system determines the costing items and inserts them in the costing structure.

   As you have planned more than 100 hours labor time, the system inserts the node ZPS004 *IT: With External Consultants* in the costing structure and not the internal activity item. You have not defined any conditions in the planning form for the variable costing item additional costs and the item is activated in each case.

9. In the costing structure click on the planning form *With External Consultants*.

   In the work area the system displays the entry screen for the planning form IT: *With External Consultants.*

10. Enter the following data:

| Field | Data |
|---|---|
| External Consultant Hours | 50 |
| Internal Working Hours | 60 |

11. Choose *Confirm.*

    The system determines the costing items and transfers these to the structure.

12. If you would like an overview of the meaning of the symbol legends displayed in the costing structure, choose .

13. If you want to see the total costs in the screen area *Costing structure*, either change the column width as appropriate or increase the screen area.

14. To show the item overview in the lower half of the work area, choose *Show/hide item view*.

15. Choose .

    The ad hoc cost estimate is saved.

# Engineer-to Order (ETO) of a Turbine

## Purpose

One of your company's main tasks is the production of high-quality and technically complex turbines, which you manufacture on behalf of power plant construction companies, and so on. You purchase some of the turbine components from suppliers, the rest you manufacture yourself. Each process, from component assembly, to plant acceptance and delivery to the customer, is extremely time-consuming. Delays may lead to severe contractual penalties, and therefore, should be avoided at all costs, or possible delays should be recognized as such long before they arise.

You manage the manufacture of turbines as project business. This allows you to plan and monitor dates, costs, and revenue on a project-basis. Because of your long years of experience in this area, you already have standard project structures, such as project plans, and networks, as well as standard production data, such as task lists, prices, duration, and so on. You can use these templates at the start of a new project, and tailor them to the individual needs of each project.

## Process Flow

1. On the basis of an inquiry, you create an operational project. Because you are experienced in designing and manufacturing turbines, you can make reference to an existing standard work breakdown structure (WBS) and standard networks in the system. First, you check the feasibility of the project dates. So that you can quote a sales price, you perform sales pricing on the basis of the project planning data.

   Inquiry and Quotation Processing [Page 78]

2. On acceptance you create a sales order and release the project. You plan revenue using a billing plan in the sales order. You control the different billing dates using project milestones. In accordance with the contractual negotiations with the customer, a down payment is made on conclusion of the contract.

   Order Entry Processing [Page 98]

3. You procure one of the turbine components externally from a supplier, and run through purchase order handling for that part. You manufacture one of the components yourself. The decision on which components are to be externally procured, and which are to be manufactured in-house has already been made.
   You place orders for long-lead items early to avoid delays to project progress. Your project controls the requirement for particular components in the manufacture of the turbine. As soon as all components are available, you assemble the turbine.

   Project Processing [Page 112]

4. You deliver the finished product to your customer. Using confirmation, you create the customer acceptance and generate the final invoice.

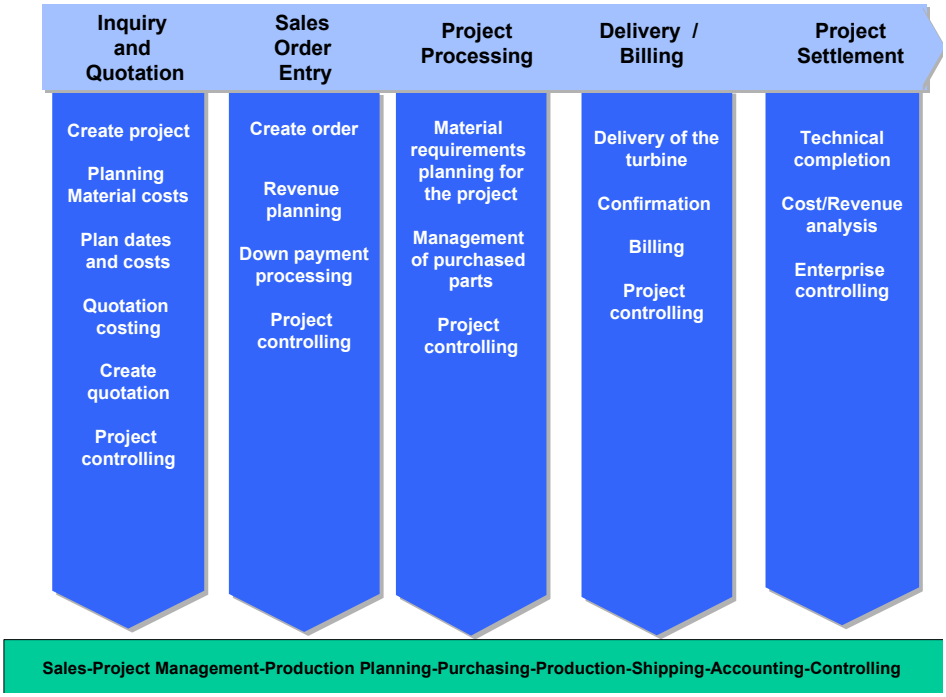
   Turbine Assembly [Page 145]

5. During project processing, you constantly control project earned value using confirmations and the cost/revenue situation, so that you can take any corrective action that may be required. You run several period-end closings, however only one is run as an example. On completion of the project you create the final invoice and close the project technically.

## Engineer-to Order (ETO) of a Turbine

Period-End Closing with the Schedule Manager [Page 150]

The following graphic illustrates the different project phases, the activities in these phases, and the enterprise areas involved in each phase.




The process described in the example contains the most important aspects in project processing, and the possibilities of implementing them in the SAP System.
The processes are **not** intended to be complete. For example, project settlement is not described, because the most important activities are already described in the period-end closing.

# Data Used in this IDES Process

## Data in SD - Sales

| Field | Data | Description |
|---|---|---|
| Inquiry type | IN | RFQ |
| Order type | PS1 | PS:Order |
| Sales organization | 1000 | Frankfurt, Germany |
| Distribution channel | 10 | Final customer sales |
| Division | 00 | Cross-divisional |
| Sold-to party | 1600 | TALPA GmbH, Hannover |
| DIP profile | 13000000, Usage 11 | Choose the Sales B tab page |

## Data in FI - Incoming Payments

| Field | Data | Description |
|---|---|---|
| Type | DZ | Customer payment |
| Company code | 1000 | IDES AG |
| Currency/rate | UNI or DEM | DEM in client 800 only |
| Customer account | 1600 | TALPA GmbH |
| Spec. G/L indicator | A | Down payment |
| Bank account | 113100 | Receivables – Domestic customers |

## Data in PS – Basic Data

| Field | Data | Description |
|---|---|---|
| Standard WBS | T-20000 | Turbine |
| Standard network | T-20000 | Turbine standard |
| Standard project definition | T-20000 | Turbine standard |
| Operational project | T-100## | <own description> |
| Project profile | Turbine standard | -- |
| Project definition operational project | T-100## | <own description> |

**Data Used in this IDES Process**

| | | |
|---|---|---|
| Plan.board prf | Turbines | -- |

### Data in PS – Material (Bill of Material Transfer)

| Field | Data | Description |
|---|---|---|
| Project definition | T-100## | <own description> |
| Profile | 1300 | Universal material BOM transfer |
| Material | T-20000 | Turbine system |
| Plant | 1300 | Frankfurt |
| BOM usage | 3 | Universal |

### Data in PS – Controlling (Period-End Closing)

| Field | Data | Description |
|---|---|---|
| Variant | GR## | <own description> |
| DB profile | 130000000000 | IDES: Structure with SD documents |
| Controlling area | 1000 | CO Europe |
| Task list | ZIDES | IDES: Period-end closing |
| Flow definition | Z-130 | PS: Period-end closing (large) |

### Data in PS – Information System

| Field | Data | Description |
|---|---|---|
| Data profile | 130000000000 | IDES: Structure with SD documents |
| Controlling area | 1000 | CO Europe |
| PS Info Profile | YIDES_130000 | IDES: Dates and Costs (Planned/Actual) |

### Data in MM - Purchasing

| Field | Data | Description |
|---|---|---|
| Purchasing organization | 1000 | IDES Germany |
| Vendor | 1000 | C.E.B. Berlin |
| Plant | 1300 | Frankfurt |

| | | |
|---|---|---|
| WBS Element | T-100## | <own description> |

### Data in MM - Goods Movements

| Field | Data | Description |
|---|---|---|
| Movement type | 101 | Goods receipt for purchase order/order in/to warehouse |
| Plant | 1300 | Frankfurt |
| Storage location | 0001 | Storage location 0001 |

### Data in PP - Shop Floor Control

| Field | Data | Description |
|---|---|---|
| WBS Element | T-100## | <own description> |
| Material | T-20600 | Complete bearing box |
| Production plant | 1300 | Frankfurt |
| Order type | pp01 | Standard production order |

# Concept and Product Design

## Purpose

The turbine is fully developed and the required materials, BOMS, drawings, and so on are stored in the system as master data.

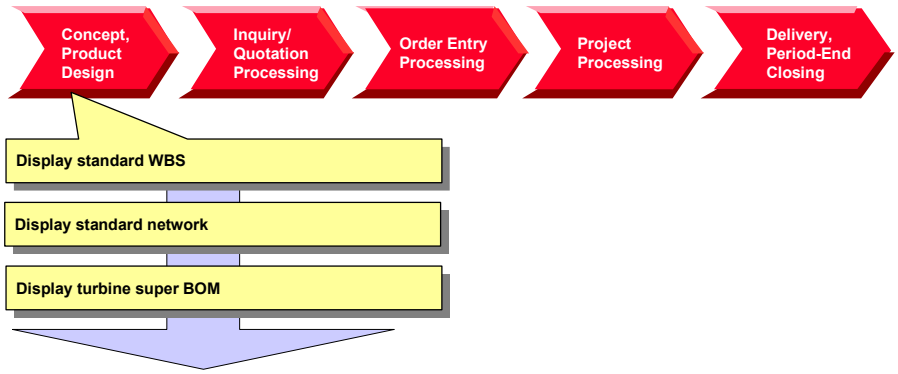
Project processing is also prepared, in that there are standard templates (WBS and networks) in the system.

Independent from the operational business of manufacturing and project processing, the development, design and standardization departments constantly update the system data, so that the most up to date data is always available.

## Process Flow

The concept and product development phase is not a part of the project processing for the turbine manufacture. You do not have to perform the steps described here, because they do not affect the process of turbine manufacture. However, they help you become acquainted with the data and project used in the turbine manufacture.

You check different templates. The following graphic reflects each activity.



# Displaying a Standard WBS

## Use

The manufacture and delivery of complex turbines is part of the day-to-day business of your company. You have reflected your experience in standard structures so that large projects can be processed quickly and in a standard way.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Basic Data* → *Templates* → *Standard WBS* → *Display* |
| **Transaction Code** | CJ93 |

2. Enter the following data:

| Field | Data |
|---|---|
| Std. project def. | T-20000 |

3. Choose .
4. To display a hierarchy graphic of the project, select .

# Displaying a Standard Network

## Use

Standard networks are assigned to the standard project. When creating the operational project, the standard network is used as a template for the operational network that is created with the project. It contains internal and external processing, as well as primary costs, however it does not contain materials.

In the course of the project, materials are copied from the WBS BOM to the network and assigned to individual activities by using the BOM-PS interface. For the assignment, reference points to each activity have already been maintained in the standard network.

### You can find further information in the SAP Library under

*Logistics* → *Project System (PS)* → *Structures* → *Standard Structures* → *Standard Networks*

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the node *Templates*, choose *Standard network* → *Display* |
| **Transaction Code** | CN03 |

2. Enter the following data:

| Field | Data |
|---|---|
| Standard network | T-20000 |

3. Choose .

   You see an overview of the activities. The internal and external processing, and primary costs are maintained on different tab pages.

4. To view the reference points for the assignment of materials over the BOM-PS interface, select the *Total* tab page.

5. If you want to display the individual activities and their relationship to each other, choose .

# Display the Turbine Product Structure

## Usage

The product structure displays the link between the different objects from PDM, such as material, BOMs, and so on.

**For more information on the *Product Structure Browser*, see the SAP Library under:**

*Cross-Application Components* → *Document Management* → *Product Structure Browser*

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Central Functions* → *Engineering* → *Environment* → *Product Structure* |
| **Transaction Code** | CC04 |

2. On the *Material* tab page, enter the following data:

| Field | Data |
|---|---|
| Material | T-20000 |

3. Choose .

   The product structure display of the T-20000 turbine appears.

4. Expand the product structure.

   The system displays the BOM structure of the turbine, and the components and assemblies below it.

# Inquiry and Quotation Processing

## Purpose

The aim of inquiry and quotation processing is to quickly hand over a binding quotation that is attractive for the customer and justifiable from a business point of view. An initial specification of the product is created in line with the customer's requirements in the process.

On receipt, the inquiry is checked for completeness, and any queries are raised to the customer. The inquiry is then checked for its commercial and technical feasibility, and the importance of the customer for the company is evaluated. Taking order probability into consideration and on the basis of the information gained from the checks and evaluations, the company decides whether to create a quotation.

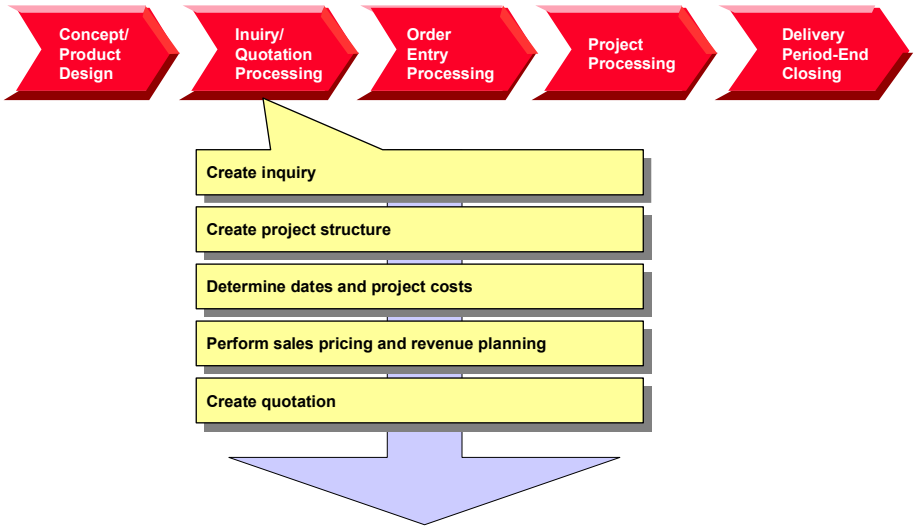
The next step is to process a technical solution. If required, the product can be configured with the help of existing variants and/or projects that have already been implemented. The technical solution is used in costing any manufacturer costs that might arise. Production and replenishment times are used to determine the delivery date. The quotation is completed by fixing the quotation price, which is determined on the basis of the price the company expects the customer will accept, or on estimated competitor prices. Legal terms and conditions are also part of the completed quotation. On completion of the quotation phase the quotation itself is created and sent to the customer. Quotation processing ends with either order placement or rejection of the quotation by the customer.

The scenario used here begins with a planning quotation. The quoted technical solution is based on estimated activity and function values, approximate measurements and weights, drawings, and brief descriptions of the main assemblies. The commercial contractual agreements indicate approximate delivery dates and general delivery terms. The quotation is created using a suggested retail price for the overall object, as well as assembly costs, and any services that might arise.

## Process Flow

1. The process begins when you receive an inquiry for a turbine. Customer documents specifying the customer's requirements in more detail may accompany this inquiry. You manage all of these documents together.
2. You expect costs to arise prior to quotation creation because of the complexity of the product and the special customer requirements. Therefore, you create an inquiry project, so that you can account assign the costs for inquiry processing.
3. You perform initial planning of dates and costs on project basis.
4. On the basis of the planned costs, you determine the sales price and transfer it to the quotation. Finally, you print the quotation and send it to the customer.

The flow of inquiry and quotation processing as explained in this example is shown in the following graphic:




## Result

On completion of inquiry and quotation processing, the customer receives a quotation that may have been revised several times over. In reality, the quotation process (quotation – rejection – recosting – new quotation) is repeated several times over until both the customer and the tenderer reach a satisfactory compromise. This cyclical process is not illustrated in this example for reasons of simplicity.

# Creating the Inquiry

## Use

Before you can perform sales pricing in the project system you have to create an inquiry.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Sales and Distribution → Sales → Inquiry → Create* |
| **Transaction Code** | VA11 |

2. Enter the following data:

| Field | Data |
|---|---|
| Inquiry type | IN (inquiry) |
| Sales organization | 1000 |
| Distribution channel | 10 |
| Division | 00 |

3. Choose .
4. Enter the following data:

| Field | Data |
|---|---|
| Sold-to party | 1600 |
| Valid from | <Today’s date> |
| Valid to | <Today’s date +1 month> |
| Req. deliv.date | <Today's date + 1.5 years> |
| Material | T-20000 |
| Order quantity | 1 |

5. Choose .
6. Choose in the information window.

   The inquiry number is displayed in the status bar.
7. Make a note of the inquiry number.

# Creating the Project Structure

## Usage

You create a project structure for the turbine in order to create the quotation. The structure of the turbine project comprises WBS elements and activities.

Since your company usually manages turbine manufacture in projects, a standard project structure already exists in the system. All you have to do is adapt this standard structure to suit the specific requirements of your current project. To do this, you copy the standard project into an operational project.

You use the *Project Builder* to create the project.

**For more information on the *Product Builder*, see the SAP Library under:**

*Logistics* → *Project System (PS)* → *Structures* → *Project Builder*

## Prerequisites

Standard project T-20000 already exists in the system.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Project Builder* |
| **Transaction Code** | CJ20N |

   When you first call up the Project Builder, a dialog box appears containing the user-specific settings that you can select. To maintain the user-specific settings, choose ✔.

   In addition to the general settings, you can also define which project objects you would like to use as templates, for example standard templates.

2. In the *Structure Tree* screen area choose → *Copy project*

   The *Create Project* dialog box appears.

3. Enter the following data:

| Field | Data |
|---|---|
| Project def. | T-10###<br>### equals any three figure number defined by you, for example 034. |
| Project profile | Turbine standard |
| Std proj. def. | T-20000 |

4. Choose ✔.

   You can see various objects in the structure tree on the left that have been copied from the standard project.

   Project definition

   WBS elements

**Creating the Project Structure**

Activities

Milestones

The activities are grouped together in two networks with provisional numbers.

5. Increase the screen area of the structure tree so that the *Identification* column is visible.
6. In *Identification and view selection* in the work area, overwrite the current entry (Turbine standard) with the name *Turbine ###.*
7. Choose , and *Yes* if any warning messages appear.

# Determining Dates and Planned Costs

## Purpose

To get a realistic idea of project dates and costs, you determine them on the basis of the planned activities.

### Date planning

For a rough estimate you store basic dates in the WBS element. These dates represent the project deadlines. You determine the dates for the overall project using WBS scheduling. The system transfers the basic dates of the WBS elements to the basic dates for the activity scheduling. In the network, the scheduled dates (earliest start and end dates) of the individual activities are determined on the basis of the maintained duration and/or delivery dates and relationships.

### Cost planning

In the SAP R/3 Project System, cost planning takes place using the WBS and the network. You will use activities to plan costs for your turbine project. When the activities are assigned, the costs of the activities are displayed for the WBS elements.

In the network, you initially plan dates, staffing resources, and operating resources. The system calculates the costs automatically on the basis of the existing price/quantity structure. If your project processing is complex (that is, if dates, resources, and costs are relevant), you use network activities for cost planning.

In integrated project management, the planned costs are determined mainly from the valuation records, prices for internal and external activities, and the required operating resources. In the network you plan the internal and external activities as well as the required operating resources against the activities. The system calculates the planned costs in consideration of the dates. The price/quantity structure stored in the system is the basis for the cost determination.

The time-based distribution of the planned costs is the result of the time-based distribution of the planned services and the operating resources for the activity.

Planning using activities and assignments to WBS elements has important advantages:

- It can be copied to other projects and stored in standard networks.
- It is easy to shift in time, if, for example, you need to postpone project work packages.
- You plan costs, dates and capacity requirements, as well as trigger procurement processes using activities (integration of planning).

### You can find further information in the SAP Library under

*Logistics → Project System (PS) → Costs*

## Process Flow

1. You schedule your project on the basis of the planned duration of activities and relationships.
2. Cost planning takes place using activities and the stored price/quantity structure. The material components are not planned yet, therefore you plan the material costs for the activities.
3. You evaluate the entire cost planning in the cost element report.

# Scheduling the Project

## Usage

To check whether you can deliver the turbines on the date agreed, you schedule your project according to that date.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project* node, choose *Project Builder*. |
| **Transaction Code** | CJ20N |

   The system displays your project in the *Preview*, as set up for your user.

2. Double-click on your project.

   The work area displays the detailed data for the project definition.

3. On the *Basic data* tab page, enter the following data:

| Field | Data |
|---|---|
| Finish date | Today's date + 1.5 years |

4. Choose .

   The system expands the project structure.

5. Choose .

   The project planning board appears. The project planning board offers you a graphical interface for the planning and monitoring of the dates of the WBS elements and activities.

6. Choose *Settings* → *Options*.

   The *Change Standard Values in Project Planning Board* dialog box appears.

7. On the *Scheduling* tab page, enter the following data:

| Field | Data |
|---|---|
| Schedul. method | WBS determines dates |

8. Choose .

9. Choose .

   The system selects all of the project objects.

10. Choose .

    Starting with the final date for the project, the system determines the earliest and latest dates for the activities, and displays the schedule situation.

11. Choose .

12. Choose *Edit* → *Reconcile dates* → *Extrapolate dates.*

**Scheduling the Project**

The system transfers the maximum scheduled dates (earliest start and latest finish) for the activities to the WBS elements, and extrapolates the dates in the project structure.

13. Choose .
14. Remain in the Project Builder.

# Recalculating Planned Costs

## Usage

You have already planned costs for the created activities by using the quantity structure for your turbine project. This quantity structure was costed automatically when you saved the project. Use the project planning board to find the origin of the activity costs.

## Procedure

1. Double-click on your project in the worklist.
2. Select your project, and choose .
3. Choose .

   The project planning board appears. On the left, the system displays the structure and the selected data, on the right the scheduling data.
4. Choose , then .
5. Increase the left screen area until the field *Project costs* is displayed.

   The system displays the activities costs aggregated for the activities (in other words, the highest WBS element shows the planned costs for the overall project).

### Controlling costing

1. Select any activity.
2. Choose .

   You now see the header data of the network.
3. Choose the *Control* tab page.

   Costing variants are stored for the network costing in **Planned** (*CstgVariantPlan* PS02) and **Actual** (*CstVariantActl* PS03). The *Plan cost calc.* indicator defines that the costs are costed automatically when saved.
4. To return to the project planning board, choose .

### Costs for internal processing activities

1. Double click on activity *Maßzeichnung/Berechnung/Entwurf* (1000).

   Activity 1000 is an internal processing activity.

   Look at the fields that have a direct affect on costing:

   - Work center
   - Work
   - Activity type
   - Control key
   - DisKeyCapRqInt.
   - Normal Duration

**Recalculating Planned Costs**

2. To call the costing report for the activity, choose *Costs planned/actual*.

   The overhead rates and the planned costs from the internal activity are planned in the activity.

3. If necessary, choose .

4. Choose .

5. To display the project planning board, choose .

### Costs for external processing activity

1. Double click on the *Konstruktion Regelventile* (1300) activity.

   Activity 1300 is an external processing activity.

2. Choose the *Extnl* tab page.

   Look at the fields that have a direct affect on costing:

   - Info record
   - Price
   - Cost element
   - Activity qty
   - Control key

   The *Res./Purc.req.* indicator defines that the system generates the purchase requisitions for the activity on release.

3. To call the costing report for the activity, choose *Costs planned/actual*.

   The overhead rates and the planned costs from external procurement are planned in the activity.

4. Choose .

5. To display the project planning board, choose .

### Costs for the general costs activity

1. Double click on the activity *Zusatzkosten* (0200).

   This is a general costs activity. The planned costs are stored directly in the *Amount* field. On the tab page, look at the fields that have a direct affect on costing:

   - Amount
   - Distrib. Costs
   - Normal Duration
   - Control key

2. To display the project planning board, choose .

3. Choose .

# Planning Material Costs

## Use

To get as complete a view as possible of project costs at an early stage, you plan the material costs for components before they are assigned to activities.

The planned values are reduced after assigning the components. This avoids planning material costs twice.

In the meantime you have defined the project owner, to whom you assign all of the WBS elements through mass change.

## Prerequisites

Your project T-10### is open in the project builder.

## Procedure

### Assignment of material planning values to activities

1. Expand the *Turbine* → *Einkauf* node.
2. In the *Structure tree* area click on the activity *Vorabbestellungen* (3000).

   The activity number is in the last column (*Identification*).
3. In the work area, select the *Assignments* tab page.
4. Enter the following data:

| Field | Data |
|---|---|
| Mat.planning | 100.000 |

5. Maintain the planning values for the following activities at the same time:

| Activity | Field | Data |
|---|---|---|
| Materialbeschaffung für Fertigung (3100) | Mat.planning | 150.000 |
| Materialbeschaffung für Anlagenteile (3200) | Mat.planning | 250.000 |

6. Choose .

### Assignment of a project owner using mass change

1. On the tool bar, choose .
2. Choose the *WBS elements* tab page.
3. Choose .
4. Select *Person responsible* from the list on the right, and choose .

**Planning Material Costs**

5. Choose .
6. Enter the following data:

| Field | Data |
|---|---|
| New value | 01 |

7. Choose .

   The system assigns all WBS elements from your project to 01 Andreas Fischer.

8. Choose .
9. If a warning occurs, select .
10. Choose .

# Evaluating Costs in the Cost Element Report

## Usage

For project controlling, you evaluate the costs by cost element in the Project Information System.

## Prerequisites

You update planned costs to your project.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project System* node, choose *Information System* → *Financials* → *Execute Report* → *Cost Element Report.* |
| **Transaction Code** | GR55 |

2. Enter report group **`Z6P1`** and choose .
3. If required, enter database profile *130000000000*, then choose .
4. Enter the following data:

| Field | Data |
|---|---|
| Project | T-10### |
| Controlling area | 1000 |
| Plan version | 0 |
| From fiscal year | Current year |
| To fiscal year | Current year + 2 |
| From period | 1 |
| To period | 12 |
| Additional selection criteria | Delete |

5. Choose .

   The aggregated costs of your project are displayed in the report.
6. To break down the planned costs according to each object, click on the different objects in the structure tree (wbs elements or activities).
7. Choose until you reach the overview tree.
8. Choose *Yes* in the dialog box.

# Sales Pricing, Revenue Planning, and Quotation Creation

## Purpose

As a rule, you usually perform a one-off, customer-specific service in a customer project. This uniqueness means that you can rarely use standard prices to determine the sales price. You can determine a sales price on the basis of the planning data in the project and SD pricing.

The system compresses the planned costs in sales pricing into dynamic items by cost type. It then converts these into SD items by using material determination in the dynamic item processor profile (DIP profile). SD pricing is used to calculate the sales price.

**You can find further information in the SAP Library under**

*Logistics → Project System (PS) → Revenues and Earnings*

## Prerequisites

You have already planned costs by cost element for your project.

## Process Flow

1. You connect the project to the existing customer inquiry by account assigning the inquiry item to the highest WBS element (billing element) of your project T-10###.
2. To plan revenues for the project ahead of time, you create a billing plan for the billing element using sales pricing.
3. After you have checked your planning you generate a quotation from the sales pricing.

# Account Assigning the Inquiry to the Project

## Use

You account assign your customer's inquiry to the project you have already created to display the quotation costs in the project and to achieve the prerequisites for sales pricing. You store a Dynamic Item Processor Profile (DIP profile) for the sales pricing. In this profile, you define the way in which the system transfers planned costs to materials in the quotation.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales and Distribution* → *Sales* → *Inquiry* → *Change* |
| **Transaction Code** | VA12 |

2. Enter the following data:

| Field | Data |
|---|---|
| Inquiry | Your inquiry number |

3. Choose .
4. Select item 10, and choose .
5. On the *Account assignment* tab page, enter the following data:

| Field | Data |
|---|---|
| WBS Element | T-10### |

6. On the *Sales B* tab page, enter the following data:

| Field | Data |
|---|---|
| DIP profile | 13000000 |

7. Choose .

# Determining Sales Prices and Planning Revenues

## Usage

You determine the planned sales price of the turbine using sales pricing. Sales pricing offers you two views: In the *Sales Price Basis* (internal view) the system displays all of generated project costs converted to dynamic items. You determine dynamically which costs are used for the sales price. On the other hand, the sales price view is an external view and contains the determined sales price on the basis of the actually selected costs.

To identify the planned revenues from the project in sufficient time, you create a billing plan for the billing element directly from sales pricing. In the billing plan you plan the dates on which you send down payment requests or invoices relevant to customers. The billing plan in the WBS element is used purely for planning purposes, and provides you with a realistic view of revenue.

### You can find further information in the SAP Library under

*Logistics → Project System → Revenues and Earnings → Sales Pricing and Quotation Creation or Billing Plans in WBS Elements*

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project System* node, choose *Financials → Planning → Sales Pricing* |
| **Transaction Code** | DP81 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project definition | T-10### |

3. Choose *Sales price basis*.

   The internal view appears with the project-planned costs that have been converted into dynamic items.

   The table in the lower screen area serves to transfer individual costs to pricing, to change the transfer amount, to block costs, and to revalue and devalue in percent. By double clicking in the structure tree, you can transfer individual structure elements to the next level below in the table and perform the required activities.

4. Select the top line and choose .

5. Double click on the description of the WBS element T-10###.

   If you click on the symbol, the detail data appears.

6. To increase the transfer amount, enter the following for the WBS element T-10###:

| Field | Data |
|---|---|
| Transfer amount | 1.600.000 |

7. Select and confirm ( ) the warning in the status bar.

   The transfer amount of all lower hierarchy levels is also increased in percent.

### Increasing the sales price flat-rate by 10% transfer price surcharge

1. Choose *Sales price.*

   The external view with the customer quotation structure appears. The lower part of the screen contains a table (pricing procedure).

2. Select the top line in the structure tree and choose .

   The system displays the items from the sales price basis sorted and grouped by SD items. Pricing is performed in SD pricing.

3. Double-click on the top line of the *Project Quotation* structure tree to call the quotation conditions.

   The system copies the transfer amount maintained in the sales price basis to condition EK01 in the pricing procedure.

   To define a universal surcharge of 10%, enter an additional header condition.

4. Choose .

5. Enter the following data:

| Field | Data |
|---|---|
| CnTy | RA01 |
| Rate | 10 (%) |

6. Choose .

   Because of the additional header condition RA01, you have increased the sales-price flat-rate by 10%.

### Creating a billing plan for the WBS element

1. Choose *Billing Plan*.

   The system recommends the sales price as the target value for the billing plan.

2. Choose .

   The billing plan for the billing element appears.

3. Enter the following data:

| Field | Data |
|---|---|
| Billing date | <Today's date + one year> |
| % | 100 |
| BillRule | 1 |

4. Choose .

5. Choose .

6. Choose .

   The *Save* dialog box appears.

7. In the dialog box, enter the following data:

| Field | Data |
|---|---|
| SPc. short text | Sales price 01: T-10### |

   If you maintain several alternatives for sales pricing you require the short text for identification purposes.

8. Choose .

   The PS billing plan is saved automatically when you save the sales pricing.

9. Choose . Do not exit sales pricing.

# Generating the Quotation from the Sales Pricing

## Usage

You have checked the sales pricing and now generate a SD quotation.

## Prerequisites

You are in sales pricing.

## Procedure

1. Enter the following data:

| Field | Data |
|---|---|
| Project definition | T-10### |

2. Choose .
3. Choose *Sales Price*, and double click on *Project Quotation*.

   The system displays the sales pricing previously created.
4. Choose *Quotation*.

   The *Create Quotation* dialog box appears.
5. Choose *Yes*.

   The system generates a SD quotation and transfers the items and sales prices from sales pricing.
6. Enter the following data:

| Field | Data |
|---|---|
| Valid from | <Today's date> |
| Valid to | <Today's date + one month> |

7. Choose .

# Order Entry Processing

## Purpose

Incoming orders and order entry processing are important for the value-added in the MTO process. On receipt of an order, a significant amount of money may already be due. At the same time a series of activities are triggered in the enterprise, which unlike during quotation creation are binding.

In the quotation phase, documents and data that are created can be included in the order, or are the order basis. On receipt of an order however, you have to specify and define in detail the inexact and/or rough details from the quotation. The main phases of quotation processing are repeated here.

The incoming order phase finishes externally when the order confirmation is sent to the customer. Internally, this phase is complete when the requirements are finally communicated to production and procurement or assembly.

## Process Flow

1. The customer has accepted your offer for the turbine project. Now you create a sales order in the system and assign it to the project.

   When you create the sales order you can use the quotation as a reference. In this case, you receive different order items reflecting the services to be provided. If you create the order without reference, you can create a **single** item that describes the overall product.

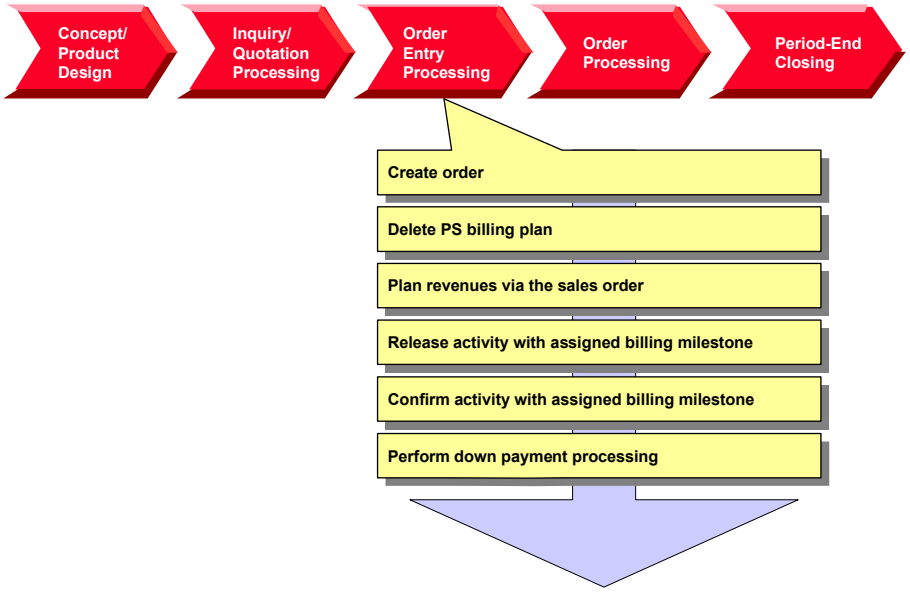
2. During the contractual negotiations, you agreed on terms of payment with the customer. You store a billing plan in the sales order. You delete the billing plan for the WBS element to enable the billing dates to be transferred from the sales order to revenue planning for the project.

3. When the customer accepts the offer, you release your project and confirm the first activities. When you confirm the activities, the customer's down payment automatically becomes due through the milestone linkage. A down payment request to the customer is created.

4. You bill the down payment to the customer.

5. When the customer makes the down payment, you post the incoming payment.

The following graphic explains the steps you follow in this example:


Concept/ Product Design
Inquiry/ Quotation Processing
Order Entry Processing
Order Processing
Period-End Closing
Create order
Delete PS billing plan
Plan revenues via the sales order
Release activity with assigned billing milestone
Confirm activity with assigned billing milestone
Perform down payment processing

# Creating the Order

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales and Distribution* → *Sales* → *Order* → *Create* |
| **Transaction Code** | VA01 |

2. Enter the following data:

| Field | Data |
|---|---|
| Order type | PS1 (PS order) |
| Sales organization | 1000 |
| Distribution channel | 10 |
| Division | 00 |

3. Choose .
4. Enter the following data:

| Field | Data |
|---|---|
| Sold-to party | 1600 |
| Purch. order no. | Any number |
| Req. deliv.date | Today's date + 1.5 years |
| Material | T-20000 |
| Order quantity | 1 |

5. Choose . In the dialog box, choose .
6. Select the sales items and choose .
7. Choose the *Account assignment* tab page.
8. Enter the following data:

| Field | Data |
|---|---|
| WBS Element | T-10### |

The request for quotation is assigned to the billing element for the turbine project.

9. Choose the *Conditions* tab page.
10. Overwrite the amount for condition PR00 as follows:

| Field | Data |
|---|---|
| CnTy | PR00 |
| Amount | 1.760.000 |

You agreed this price with the customer on the basis of the quotation.

11. Choose .

12. Make a note of the order number.
13. Choose to exit order processing.

    In the dialog box, choose *No*.

# Evaluating Revenues in the Structure Overview

## Use

In the structure overview for the project information system you evaluate the project data according to the structure.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project System* node, choose *Information System* → *Structures* → *Structure Overview* |
| **Transaction Code** | CN41 |

2. If required, enter PS information profile **`YIDES_130000`**, then choose .
3. Enter the following data:

| Field | Data |
|---|---|
| Project | T-10### |
| Additional selection criteria | Delete |

4. Choose .
5. Select project definition T-10###, and choose .

   In the *PrRevPl000* column, the system displays the planned revenues for the WBS element.

6. To transfer additional functions to the standard toolbar, choose *Choose functions*.

   The system shows a list of possible functions (left hand column). You can select functions from the left-hand column, and transfer them to the right-hand column using Drag & Drop.

7. Use Drag & Drop to select the following functions:
   - Set *Filter*: *Object names*
   - Verify: Indiv. confirmation, collective confirmation
   - *Object: Create, change, display*
8. Choose *Copy*.

   These additional symbols are transferred to the standard toolbar.

9. Remain in the report.

# Deleting the Billing Plan for the WBS Element

## Usage

Within sales pricing you have planned the revenues in a billing plan for WBS element T-10###. Because you have now received a sales order and you want to plan the billing data, you delete the billing plan for the WBS element.

## Prerequisites

You have called up the structure overview for your project in the project information system.

Evaluating Revenues in the Structure Overview [Page 102]

## Procedure

1. Select the row for the *Turbines* T-10### WBS element in the structure.
2. Use the right mouse button to choose *Object* → *Change.*

   The *Change WBS Element: Basic Data* screen appears.
3. Choose *Details* → *Billing plan.*

   This takes you to the billing plan that you maintained in sales pricing.
4. Choose *Billing Plan*.
5. Choose *Yes* from the dialog box.
6. Choose .

   The structure overview for the project information system appears.
7. Choose .

   No planned revenues are displayed on the project.
8. Remain in the report.

## Result

You have deleted the billing plan and thus the planned revenues on the billing element.

# Planning Revenues Using the Sales Order

## Usage

You plan the expected revenues using a billing plan for the sales order. This refers to the billing milestones in the project.

## Prerequisites

You have called up the structure overview for your project in the project information system.

Evaluating Revenues in the Structure Overview [Page 102]

## Procedure

1. Select the row for your sales document item *Turbinenanlage* in the structure, click the right mouse button and choose *Object* → *Change*.

   This is the first sales document item in the structure below the top WBS element (T-10### with ID #### 000010).

2. Select the item number and choose .
3. Choose the *Billing plan* tab page.

   The *Selection Criteria* dialog box appears.

4. Select WBS element T-10###, and choose .
5. Select all the milestones with and choose *Copy*.

   The billing milestones for the projects are transferred as dates into the billing plan.

   Your billing plan contains three dates:

   – The first of these is a down payment date (billing rule 4). The billing document for this date triggers a down payment request to the customer. This date is unlocked when you confirm the assigned activity (0100).

   – Dates two and three are for the partial and final invoices. After you have confirmed the plant assembly and the trial run, the customer is invoiced for 40% of the net value. The remainder is invoiced after confirmation of site assembly.

6. Choose .

   The item overview for the sales order appears.

7. Choose .

   The structure overview for the project information system appears.

8. Choose .

   The project displays the planned revenues from the billing plan for the sales order.

9. Choose to exit the report.

## Result

You have created a billing plan for the sales order by referring to existing billing milestones on the turbine project structure. The project displays the planned revenues.

In Customizing for the Project System, the planner profile specifies that the planned revenues from the sales order are updated on the project using cost element 800000.

# Releasing the Overall Project

## Usage

You release the overall project when the customer places the order. Once you have released the project, you can start working on it. You can only start posting actual costs and actual revenues to the individual WBS elements once the project has been released.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project* node, choose *Project Builder*. |
| **Transaction Code** | CJ20N |

   The Project Builder appears. The system displays your project in the tree structure as a preview.

2. Double-click on project T-10###.
3. Select the project definition *Turbine ###.*

   Note the system status (CRTD). This is displayed in the *Identification and View Selection* screen area, on the *Basic data* tab page. For more information on the system status, choose . The *Business processes* tab page shows the activities that are allowed or not allowed in the current system status for the object.

   For example, the *Incoming invoice* activity is not allowed for WBS elements, nor is *Confirm activity* allowed for activities.

4. Choose Edit → *Status* → Release.

   The value in the *System status* field changes from CRTD to REL. Releasing the project definition releases all of its lower-level objects.

5. Choose .
6. Remain on this screen.

# Confirming a Single Activity

## Usage

The project has been released, and you start working on it. You record the service provided and the project progress by confirming each activity. You start by confirming activity 0100 *Internal sales documents.* A billing milestone is assigned to this activity. When you confirm the activity, the down payment date in the sales order is released, and a down payment of 20% of the total invoice amount becomes due.

## Prerequisites

You have already released the activity.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project* node, choose *Project Builder*. |
| **Transaction Code** | CJ20N |

2. Double-click on project T-10### in the preview.
3. Expand the node *Turbine* → *Turbine*.
4. Click on activity 100 *Interne Bestellunterlagen (Verkauf).*

   The activity is highlighted and the system displays the details in the work area.
5. Choose Edit → Activity → *Confirm*

   The confirmation data for the activity appears. Accept the defaulted plan data for the confirmation.

   In Customizing for the Project System, the *Final conf.* indicator is set in the confirmation parameter for the network type.
6. Choose .

   The Project Builder screen appears. The system sets the extra status *CNF MCNF REL.*

   For more information on the system status, choose .
7. Choose and if any messages appear.

# Down Payment Processing

## Purpose

In the turbine project, you perform milestone billing for the sales order. Single billing milestones are maintained in the project. When these milestones are confirmed, the down payment date or billing document date is unlocked in the sales order.

Project Cash Management is activated in company code 1000. Payments are updated on the project. You evaluate down payment requests, down payments, and payments in the *Payments* information system.

**For more information on processing down payments, see the SAP Library under:**

*Logistics → Sales & Distribution → Billing → Down Payments for Sales Orders.*

**For more information on Project Cash Management, see the SAP Library under:**

*Logistics → Project System → Payments*

## Prerequisites

Project Cash Management is activated in the company code.

A billing plan with a down payment date is maintained for the sales order.

The down payment date for the billing plan is linked to activity 0100 by a milestone.

You have confirmed activity 0100 *Internal sales documents.*

To evaluate the payment data, call up another session in the report (from now on: Session two).

## Process Flow

1. The billing run selects all the unlocked dates from the sales order. The system creates a down payment request for the down payment date.
2. When you receive the payment, you enter the down payment in Accounts Receivable Accounting for the down payment request.

# Calling Up the Payment Report

## Usage

You evaluate payment data in the project information system.

You repeatedly check the payment data on the project during the process, therefore call up the payment report in a separate session (from now on: Session two *Payment report*). You do this by choosing . To evaluate the current data, you need to exit the report and rerun it.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Information System* → *Financials* → *Payments* → *Receipts* |
| **Transaction Code** | S_ALR_87013575 |

2. If required, enter `130000000000`, for the database profile then choose .

3. Enter the following data:

| Field name | Value |
|---|---|
| Project | T-10### |
| Additional selection criteria | Delete |
| Plan version | 0 |

4. Choose .

   The payment data overview for the project appears. Under *Receipts*, for example, the *Customer fin. budget* row displays revenue plan data from the billing plan for the sales order.

5. To continue processing, switch to another session.

# Billing the Down Payment

## Use

In the sales order, the down payment date in the billing plan is unlocked when activity 0100 *Internal sales documents* is confirmed. During the billing document run, the system selects this date and creates a down payment request.

## Prerequisites

The down payment date must be unlocked in the sales order.

The billing element (the WBS element to which the revenues are posted) must be released. Otherwise, the system creates the down payment request without a corresponding accounting document. The payment data is not updated to the project.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales* → *Billing* → *Billing Document* → *Create* |
| **Transaction Code** | VF01 |

2. Enter the following data:

| Field | Data |
|---|---|
| Document | <Your sales order number> |

You can search for the order number by entering WBS element T-10### under *Search criteria* and then choosing *Search*.

Normally a billing document for many sales documents is executed using the *Process billing due list* mass transaction

3. Choose .

The system selects only one item as a down payment request.

4. Choose .

## Result

The down payment request has been created, and the data on the project has been updated. To evaluate the data, switch to session two (*Payment report*). To evaluate the current data, you need to exit the report and rerun it.

The system displays the down payment request in the *Customer down payt. req.* row.

# Posting the Down Payment

## Usage

The customer has made the down payment, and you post the down payment receipt.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Financial Accounting* → *Accounts Receivable* → *Document Entry* → *Down Payment* → *Down Payment* |
| **Transaction Code** | F-29 |

2. Enter the following data:

| **Field** | **Data** |
|---|---|
| Document date | Today‘s date |
| Type | DZ |
| Company code | 1000 |
| Posting date | Today‘s date |
| Currency/rate | EUR |
| Customer account | 1600 |
| Special G/L ind | A |
| Bank account | 113100 |
| Amount | 408.320 |

3. Choose *Requests*.

   The system selects the corresponding down payment request.

4. Select the down payment request and choose *Create down payments.*

   The document overview appears.

5. Choose and if any warning messages appear.

## Result

In FI and accounting, the down payment document is posted and the data on the project is updated.

To evaluate the data, switch to session two (*Payment report*). To evaluate the current data, you need to exit the report and rerun it.

The system displays the down payment in the *Cust. down payments* row. The down payment request is reduced to zero with the down payment. The net amounts are displayed on the project.

# Project Processing

## Purpose

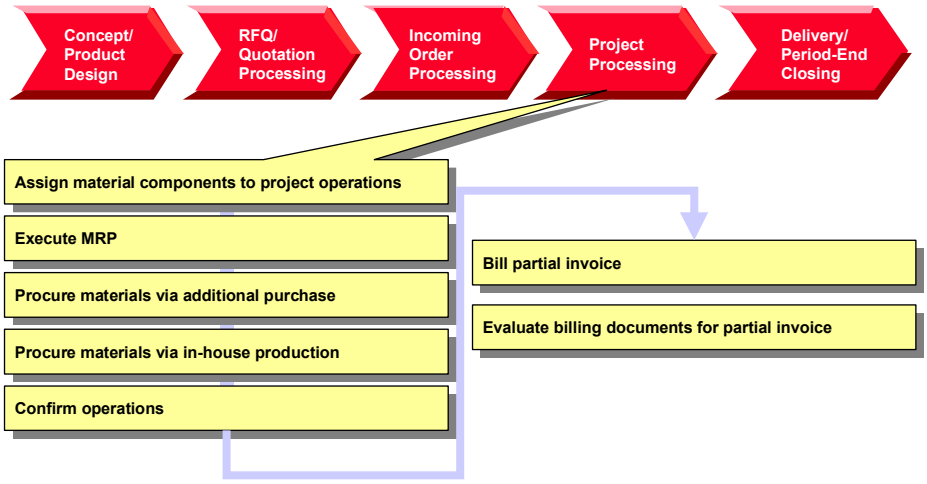
Once you have received your customer's down payment, you begin processing the project. If the construction department has released the bill of materials (BOM), you assign the components on the BOM for the turbine to the network activities of the project.

You explode the turbine assembly BOMs using material requirements planning (MRP). You order some of the turbine components from a vendor, and produce the rest in-house.

You confirm each activity, and once a certain milestone has been reached you bill a partial invoice.

## Process Flow

The following shows each step in order processing:



# Assigning Material Components to the Project Activities

## Use

For your turbine project, the construction department has created project bills of material (BOM) and material masters using CAD systems. To plan material costs in detail and to trigger component procurement, you assign the components to the activities for your project, using the *BOM-PS Interface.*

You can either handle materials in the network or you can assign them dynamically using the BOM PS interface. The latter has the advantage that you can process the project and the BOM separately. If, due to order-specific adjustments, for example, the engineering/design department needs to update the BOM, you can copy these changes to your project by using BOM transfer functionality.

**For more information on BOM transfer, see the SAP Library under:**

*Logistics → Project System → Material → BOM Transfer*

## Prerequisites

The system contains a BOM for material T-20000.

Identical reference points are maintained in the BOM and for the network activities.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project System* node, choose *Material → Planning → BOM Transfer* |
| **Transaction Code** | CN33 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project definition | T-10### |
| Profile | 1300 |
| Material | T-20000 |
| Plant | 1300 |
| BOM usage | 3 |

3. Choose .

   The results overview displays the components in the multilevel BOM that are assigned to your project activities because they have the same reference points. The components are assigned when you save your data.

4. Choose .

## Result

You have assigned material components to different activities in your turbine project. The system automatically creates reservations for the material components.

# Executing Material Requirements Planning

## Use

You use MRP planning for the turbine project, to schedule procurement tasks for the material requirements. The system creates planned orders for materials produced in-house, and purchase requisitions for externally procured components.

The procurement type in the material master controls the decision as to whether materials are to be produced in-house, or externally procured. You can check the procurement type for each material component in the Project Builder as follows: In the structure area, choose a material component and switch to the *Identification and View Selection* screen area to the *Procurement Parameters* tab page. In the *Material Master Data*, the *Procurement* field displays the procurement type specified for this material.

Until the *Purchasing* phase of the project, you only plan the independent requirements for the turbine components via the material components for the activity.

A bill of materials (BOM) and a routing is created for the bearing box. During a project-related MRP run, planned orders are created for the assembly purchase. The T-20600 assembly BOM is exploded in the planning run, and dependent requirements for the components are created.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project System* node, choose *Material* → *Planning* → *MRP* → *Project* |
| **Transaction Code** | MD51 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project def. | T-10### |
| Create purch.req. | 1 |
| Also plan unchanged components | Select |
| Display material list | Select |

Via the parameters in the *Create Purchase Order* field, you have specified that the system creates a purchase order for the externally procured materials.

3. Choose .

The system asks you to check the input parameters.

4. Choose .

The system plans the material requirements and displays statistics. Purchase requisitions were created for the externally procured materials, and planned orders were created for the in-house materials.

# Processing Purchasing, Example: Material Purchasing

## Purpose

Material components required for processing the project are purchased from vendors. You take on the role of the purchasing department and also execute the goods receipt for the purchase order.

For the sake of simplicity, it is assumed that all materials to be externally procured are obtained from one vendor. This is not advertised in the purchasing department.

The materials are recorded in the valuated project stock. When you receive the goods, you post the materials to the project stock. These materials are only withdrawn when required for the reservation for the network activities. You can check the effects of the different activities in the cost element report and the stock/requirements list.

## Process Flow

1. For the components that are to be externally procured for the turbine, you assign the purchase requisitions to a vendor.
2. In Purchasing, you create a purchase order.
3. You post the goods receipt for the ordered components to the project stock.
4. You post the goods issue for the reservation of the components using the network of your turbine project.

# Checking the Stock/Requirements List

## Usage

The materials are recorded in the valuated project stock. You check each stock situation in the stock/requirements list, for example, for material T-20100.

As you repeatedly check the stock situation during the process, call up the stock/requirements list in a separate session (from now on: Session three *Stock/Requirements*). You do this by choosing . To evaluate the current data, you can use to update the report at any time.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Information System* → *Material* → *Stock/Requirements* |
| **Transaction Code** | MD04 |

2. Enter the following data:

| Field | Data |
|---|---|
| Material | T-20100 |
| Plant | 1300 |

3. Choose .

   The stock/requirements list appears.

4. For more information on an MRP element, choose .

# Assigning a Purchase Requisition to a Vendor

## Usage

For the sake of simplicity, you order all your materials from the same vendor. You use existing purchasing info records to assign the purchase orders to the vendor.

## Prerequisites

A purchase requisition has been created for external procured components.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project System* node, choose *Information System* → *Material* → *Purchase Requisitions* → *For Project* |
| **Transaction Code** | ME5J |

2. If required, enter database profile `130000000000`, then choose ✔.
3. If required, enter controlling area 1000, then choose ✔.
4. Enter the following data:

| Field | Data |
|---|---|
| Project | T-10### |
| Scope of list | A |
| Plant | 1300 |

5. Choose .

   The top of the list displays the purchase requisition for the externally processed activity (*Construction of control valves).*

6. Choose *Edit* → *Select* → *Select all* followed by *Assign Automatically.*

   The *Source of Supply Overview* dialog box appears.

7. Place your cursor on info record *5500000093*, then choose ✔.

   The system assigns vendor 1000 with info record 5500000093 to all purchase requisitions.

8. Choose .

   The purchase requisitions are changed accordingly.

# Making a Purchase Order

## Use

In purchasing, you create a purchase order for the vendor, by selecting the assigned purchase requisitions.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Materials Management* node, choose *Purchasing* → *Purchase Order* → *Create* → *Via PReq Assignment List* |
| **Transaction Code** | ME58 |

2. Enter the following data:

| Field | Data |
|---|---|
| Purchasing organization | 1000 |
| Vendor | 1000 |
| Plant | 1300 |
| WBS Element | T-10### |

3. Choose .

   The system selects the assignment list for vendor 1000.

4. Select the line *1000 NB 1000* and choose *Process assignment*.

   The *Create Purchase Order* screen appears. In the standard, the middle part of the screen shows explanatory documentation.

5. To close the documentation, choose .

   The left part of the screen now shows a document overview. If it does not, choose *Document Overview On*. Adapt the screen area as necessary.

   On the right-hand side of the screen, you see the work area for the activity.

6. Select your purchase requisitions in the document overview, then choose .

   If you want to select more than one object at the same time, keep the control key pressed whilst you make your selection.

   The system transfers the items from the purchase requisition to the purchase order.

7. Choose .

   The system confirms the posting and displays a purchase order number. Make a note of this number.

## Result

You have created a purchase order. The purchase order (BS-EIN) is now displayed as a receipt element in the stock/requirements list.

Switch to session three *Stock/Requirements* or call up the current Stock/Requirements List [Page 119] again. To evaluate the current data, choose .

The purchase order causes a purchase order commitment on the project. As the purchase order items are assigned to WBS element T-10###, the commitment is also displayed for this WBS element only.

Evaluating Commitments in the Cost Element Report [Page 123]

# Evaluating Commitments in the Cost Element Report

## Usage

You switch to a different session and call up the cost element report.

## Procedure

### Calling up the cost element report

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Information System* → *Controlling* → *Execute Report* → *Cost Element Report* |
| **Transaction Code** | GR55 |

2. Enter report group *Z6P1* and choose .
3. If required, enter database profile *130000000000*, then choose .
4. Enter the following data:

| Field | Data |
|---|---|
| Project | T-10### |
| Controlling area | 1000 |
| Plan version | 0 |
| From fiscal year | Current year |
| To fiscal year | Current year + 2 |
| From period | 1 |
| To period | 12 |
| Additional selection criteria | Delete |

5. Choose .

   In the *Unfinished Products* row, the system displays a purchase order commitment for WBS element T-10###.

   To check this, select another element in the structure display other than the top WBS element. The system does not display any commitment values.

### Evaluating costs in detail

1. To call up the line item report, select the value in the *Commitments* column, and choose .

   The line item report displays each purchase order item separately.

2. To display the document, select a row and choose *Document.*

   The purchase requisition document appears.

3. Make a note of the number for the purchase requisition document.

4. Choose , until the *Cost Element Report* appears.
5. Change session.

# Posting the Goods Receipt for the Purchase Order

## Usage

The ordered materials are delivered and you enter the goods receipt.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Purchase order* node, choose *Follow-on functions* → *Goods receipt*. |
| **Transaction Code** | MIGO |

2. Enter the following data:

| Field | Data |
|---|---|
| Purch.order | Your purchase order number |
| Document date | Today's date |
| Posting date | Today's date |

3. Choose .

   The system transfers the purchase order data to the item overview of the goods receipt document.

4. In the *Item Overview* section, enter the following data for each item:

| Field | Data | Description |
|---|---|---|
| Storage location | 0001 | Material storage |

5. Set the *OK* indicator for your items in the *Item Overview* section.

   If the OK indicator is not active in the item overview, close the item detail area or set the *Item OK* in the lower area of the item detail.

6. Choose *Post*.
7. Note the goods receipt document number.

## Result

The material is posted to the project stock during goods receipt. The following applies for the current stock/requirements list:

- The material is available in the project stock
- A receipt is not expected
- The reservation via the activity is not changed

Switch to session three *Stock/Requirements* or call up the current Stock/Requirements List [Page 119] again. To evaluate the current data, choose .

### Posting the Goods Receipt for the Purchase Order

The delivered materials are posted to the project stock. As the goods receipt is assigned to WBS element T-10###, the stock is also displayed for this WBS element only.

Evaluating Goods Receipt in the Cost Element Report [Page 127]

# Evaluating the Goods Receipt in the Cost Element Report

1. Switch to session two or call up the cost element report.

   Evaluating Costs in the Cost Element Report [Page 91]

   In the *Unfinished Products* row, the system displays a stock value for WBS element T-10###. The commitment is reduced to zero.

2. To call up the line item report, select the value in the *Stock* column, and choose .
3. To display the document, select a row and choose *Document.*

   The material document appears.

4. Choose , until the *Cost Element Report* appears.
5. Change session.

# Network Assembly

## Usage

The purchased components were posted to the project stock. Reservations were automatically created for the components when the bill of materials (BOM) was assigned to the activity. You now require the components for the assembly. When you withdraw the components from the project stock, goods are automatically withdrawn for the reservation.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Materials Management* node, choose *Inventory Management* → *Goods Movement* → *Goods Issue* |
| **Transaction Code** | MB1A |

2. Enter the following data:

| Field | Data |
|---|---|
| Plant | 1300 |
| Storage location | 0001 |

3. Choose *To Reservation.*
4. Enter the following data in the dialog box:

| Field | Data |
|---|---|
| Network | First network for your project T-10## (Search using F4 Help for the *Network* field. |

5. Choose .
6. Select all the components except components P-100 and T-20600.

   These components are produced in-house.
7. Choose *Copy.*

   An overview of the collected components appears.
8. Choose .

## Result

The goods issue is posted. This leads to a credit of WBS element T-10### and of the activity. The project stock is reduced and the reservation is reduced to zero by the activity.

Switch to session three *Stock/Requirements* or call up the current Stock/Requirements List [Page 119] again. To evaluate the current data, choose .

The components are taken from the project stock via the goods issue for the reservation. On the network activity, the actual costs are posted using consumption cost element 890000. The stock

value of the WBS element under cost element 790000 *Unfinished Products* is reduced accordingly.

Evaluating Goods Issue in the Cost Element Report [Page 130]

# Evaluating the Goods Issue in the Cost Element Report

6. Go to session 2 *Cost Report*.
7. To evaluate the current data, call the cost element report again.

   Evaluating Costs in the Cost Element Report [Page 91]

   The consumption causes actual costs on activities 3000, 3100, and 3200 under cost element 890000 (*consumption of Semifinished products).* The stock value for WBS element T-10### is reduced accordingly.
8. To display the actual costs separately for each activity, select activities 3000, 3100 and 3200 one after the other in the structure display.
9. To call up the line item report, select the value in the *Actual* column, and choose .
10. To display the material document, select a row and choose *Document.*

    There is only one material document as the goods issue took place for all items simultaneously.
11. Choose , until the *Cost Element Report* appears.

# In-House Production of a Turbine Component

## Purpose

The T-20600 assembly is produced in-house. Production begins with purchasing the components. Later in the process a production order is created and confirmed. The assembly is then delivered to the project stock where it is taken for use in the final assembly of the turbine via the network.

## Process Flow

1. A planned order was already created via the MRP run for the T-20600 component (bearing boxes). You now convert this to a production order.
2. You post the goods issue for the *bearing box* components and then assemble the bearing box. You have already purchased the components and posted them to the project stock.
3. You post the goods receipt for the completed bearing box to the project stock.
4. You use the activity to post the goods issue for the reservation for the date that the components are required.

# Creating Production Orders

## Usage

You produce assembly T-20600 (bearing boxes). You have already purchased the components for this assembly (T-20610, T-20620 and T-20630) via the collective purchase order for the project.

Via the order report, you select the plan order created by material requirements planning.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Information System* node, choose *Material* → *Order Report* |
| **Transaction Code** | MD4C |

2. Enter the following data:

| Field | Data |
|---|---|
| WBS Element | Select |
| *WBS element* field | T-10### |
| With hierarchy | Select |

3. Choose .

   The system displays the existing reservations for the project.

4. Select Material T-20600, then choose .

   The order report appears with an overview of the reservation and the planned order for the material.

5. Choose *All*.

   The system displays the secondary requirements for the T-20600 component and the current procurement situation.

6. Place the cursor on the row for the planned order and choose *Detail* → *Plnd Ord.* → *Prod. Ord.*

7. To display the component overview, choose .

8. Choose .

   You have already released the production order.

9. Choose .

   The order report appears. In the status row, the system displays the number of the production order.

10. Make a note of the order number.

# Posting Components Goods Issue for Production Order

## Use

You need three components to produce bearing box T-20600. You post this from the project stock for the production order

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Production* node, choose *Shop Floor Control* → *Goods Movement* → *Goods Issue.* |
| **Transaction Code** | MB1A |

2. Enter the following data:

| Field | Data |
|---|---|
| Plant | 1300 |
| Storage location | 0001 |

3. Choose *To Order...*
4. Enter the following data:

| Field | Data |
|---|---|
| Order | <Your production order number> |

5. Choose .
6. Choose .

   The goods issue for the three components required to produce T-20600 is posted.

## Result

The goods issue is posted. This leads to the WBS element T-10## being credited. The project stock is now reduced to zero.

Switch to session three *Stock/Requirements* or call up the current Stock/Requirements List [Page 119] again. To evaluate the current data, choose .

The components are taken from the project stock via the goods issue for the order. At the same time, the production order is debited using a consumption cost element, and the stock value of the WBS element is reduced accordingly using cost element 79000 *Unfinished Products.* As the production order is assigned to the WBS element, the actual costs from the production order are displayed on the WBS element.

Go to session 2 *Cost Report*. To evaluate the current data, call the Cost Element Report [Page 91] again.

# Confirming the Production Order

## Use

The system automatically posts the following when an order is finally confirmed:

- The services rendered in the individual activities
- The goods receipt in the project stock for the produced assembly

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Shop Floor Control* node, choose *Confirmation* → *Enter* → *To Order* |
| **Transaction Code** | CO15 |

2. Enter the following data:

| Field | Data |
|---|---|
| Order | The number of your production order |

3. Choose .
4. Enter the following data:

| Field | Data |
|---|---|
| Final conf. | Select |
| Conf. Yield | 2 |
| Un. | PC |

5. Choose .

# Posting Goods Receipt for Material Produced In-House

## Use

Production of the T-20600 component for the turbine is complete. In the following, you post the goods receipt for the production order to project stock.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Shop Floor Control* node, choose *Goods Movement* → *Goods Receipt* |
| **Transaction Code** | MB31 |

2. Enter the following data:

| Field | Data |
|---|---|
| **Movement type** | **101** |
| **Order** | **<Number of your production order>** |
| **Plant** | **1300** |
| **Storage location** | **0001** |

3. Choose .
4. Choose .

   The goods receipt of the completed component (T-20600) is posted to the warehouse.

## Result

The component produced is posted to the project stock during goods receipt. The following applies for the current stock/requirements list:

- The material is available in the project stock
- A receipt is not expected
- The reservation via the activity is not changed

Switch to session three *Stock/Requirements* or call up the current Stock/Requirements List [Page 119] again. To evaluate the current data, choose .

The component produced is posted to the project stock. The stock is displayed only for WBS element T-10##. The production order is credited accordingly.

# Posting Goods Issue for Reservation of the Network

## Usage

The component produced was posted automatically to the project stock when the production order was finally confirmed. When the bill of materials (BOM) was assigned, a corresponding reservation for the activity was created. If the component is required, goods are withdrawn for the reservation.

## Procedure

5. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Issue* |
| **Transaction Code** | MB1A |

6. Enter the following data:

| Field | Data |
|---|---|
| Movement type | 101 |
| Plant | 1300 |
| Storage location | 0001 |

7. Choose *To Reservation.*
8. Enter the following data:

| Field | Data |
|---|---|
| Network | First network for your project T-10## (Search using F4 Help for the *Network* field) |

9. Choose .
10. Select component T-20600.
11. Choose *Copy.*
12. Choose .

    The component is posted to the goods issue document.

13. Choose .

## Result

The goods issue is posted. The project stock is reduced and the reservation is reduced to zero by the activity.

Switch to session three *Stock/Requirements* or call up the current Stock/Requirements List [Page 119] again. To evaluate the current data, choose .

**Posting Goods Issue for Reservation of the Network**

The components are taken from the project stock via the goods issue for the reservation. This leads to a credit of WBS element T-10### and of the activity. On network activity 4100 "Production of runners/rotors and bearing boxes, (cum.)", the actual costs are posted using consumption cost element 890000. The stock value of the WBS element under cost element 790000 *Unfinished Products* is reduced accordingly.

Switch to session two *Cost Report,* or call up the cost element report [Page 91] again. To evaluate the current data, choose .

# Confirming the Activities

## Usage

The processing of several activities in your turbine project T-10### is complete, and you now confirm the activities. An efficient way to do so is to enter confirmation in the PS Information System (Structure/Dates). There you can evaluate the data (actual dates, actual costs) entered immediately.

## Prerequisites

You have transferred the additional functions and *Confirmation* via to the standard toolbar.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Information System* → *Structures* → *Structure Overview* |
| **Transaction Code** | CN41 |

2. If required, enter PS information profile **`YIDES_130000`**, then choose .
3. Enter the following data:

| Field | Data |
|---|---|
| Project | T-10### |
| Additional selection criteria | Delete |

4. Choose .
5. Select project definition T-10###, and choose .
6. Choose → *Object Name*.
7. Enter the following data:

| Field | Data |
|---|---|
| Network | First network of your project T-10### |

8. Choose for the *Activity* field.
9. On the *Intervals* tab page, enter the following values:
   - 1000 to 1300
   - 2000 to 2200
   - 3000 to 5000
10. Choose .
11. Choose .

**Confirming the Activities**

The system selects all activities that meet the filter requirements. The structure overview also displays the hierarchy upwards, and the components.

12. Choose and then → *Collective Confirmation*.
13. For all activities, select the *F* indicator (Final confirmation)

    For the sake of simplicity, use today's date for the confirmation, as real dates are not relevant for this example. In a real situation, you might expect cost changes due to price markups if there were, for example, time delays.
14. Choose .

    The structure overview appears.
15. Choose to display the current data.

## Result

The confirmation resulted in the actual dates and actual costs for the network activities being updated. The actual costs are displayed in aggregated form for the WBS elements.

A billing milestone is assigned to activity 5000. Once you have confirmed the activity, the milestone is exploded and this unlocks the billing date in the sales order.

# Billing Partial Invoices

## Usage

The "partial invoice" billing date was unlocked in the billing plan after activity 5000 was confirmed. The system generates a billing document for the customer using billing. During this process, the down payments are cleared.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Sales and Distribution* node, choose *Billing* → *Billing Document* → *Create* |
| **Transaction Code** | VF01 |

2. Enter the following data:

| Field | Data |
|---|---|
| Document | Your sales order number, generally defaulted by the system |

3. Select your order number, then choose .

   In the overview for the billing items, the screen title shows that an invoice is being created. The invoice contains two items, one for the partial invoice (item 10), and one for the allocation of the down payment (item 11). In our process, the down payment is completely allocated with the first partial invoice.

   You can manually reduce the amount to be cleared by using the condition schema. Select your item 11 and choose .

4. Choose .
5. Choose *Billing Document* → *Change*.
6. Choose .
7. Note this accounting document number.

## Result

The billing request has been created, and the data have been updated in Financial Accounting and on the project.

Unlike the down payment, the data from the billing document is updated in the form of actual revenues on the project.

To evaluate the data, change the session and call up the payment report again.

Call Up Payment Report [Page 109].

Once the down payment has been cleared, the down payment amount is reduced to zero and displayed in the *Cust. Payments* row. The system displays the remaining amount from the billing request in the *Cust. payt obl. inv.* row.

**Billing Partial Invoices**

Note that due to the purchase order for the material components, the commitments on the credit side are also updated on the project.

# Entering the Incoming Payment

## Prerequisites

The open items should automatically be assigned to the accounting document (actively). To check this, choose *Settings* → *Processing Options* → *Open Items*. The *Selected Items Inactive* should not be selected.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Financial Accounting* → *Accounts Receivable* → *Document entry* → *Incoming payment* |
| **Transaction Code** | F-28 |

2. Enter the following data:

| Field | Data |
|---|---|
| Document date | Today‘s date |
| Bank data<br>Account | 113100 |
| Amount | 396070,40 |
| Open item selection: Account | 1600 |
| Further selection<br>Document number | Select |

3. Choose .

4. Enter the following data:

| Field | Data |
|---|---|
| Document number from | Accounting document number you noted |

5. Choose *Process open items.*

   Two open items are displayed for your document: The invoice amount and the down payment clearing. The items and the cash discount amounts are already assigned to the open amount according to the user settings.

   To assign an amount, place the cursor on the amount and choose *Items* or *Cash Discount*.

6. Choose .

# Transferring Payment

## Usage

When you enter the invoice, a document with value type "Invoice" is created in Project Cash Management. This value type is not changed, even if the invoice is cleared. The cleared invoice is only displayed with the "Payment" value type once the payment has been transferred.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project System* node, choose *Controlling* → *Period-End Closing* → *Single Functions* → *Payment Transfer* |
| **Transaction Code** | CJFN |

2. Enter the following data:

| Field | Data |
|---|---|
| Fiscal year | Current year |
| FI document number (invoice) from | Accounting document number you noted |
| To | Accounting document number you noted |
| Test run | Deselect |

3. Choose .

   The log for the payment transfer appears.

## Result

As a result of the payment transfer, the incoming payment is also displayed correctly in the *Cust. Payments* row in Project Cash Management.

Call up the Payment Report [Page 109] again.

# Turbine Assembly

## Purpose

In this process it is presumed that the turbine is assembled in the plant. Delivery to the customer takes place as a whole and is not entered explicitly in the system. After the turbine has been successfully assembled and inspected, the last activities are confirmed and the final invoice is created.

## Process Flow

1. You enter confirmation of the activities.
2. This confirmation causes the last billing milestone to be triggered and you create the final invoice.

# Entering a Construction Assembly Confirmation via the Internet

## Usage

The turbine has been successfully installed at the customer site. As you are still on the construction site, you confirm the activities via Internet.

You have conducted an on-site check, to ensure that the prerequisites have been met for starting the assembly of the turbine - for example, that it has been delivered undamaged. You confirm the result of activity *5100 First progress check* via Internet.

## Prerequisites

You can only confirm work over the Internet if you are working in an IDES system that is connected to an Internet Transaction Server (ITS).

If you do not have such a system, you should enter an individual confirmation for the assembly of the construction site.

Entering an Individual Confirmation [Page 148]

## Procedure

1. Switch to your Internet Browser (for example, Netscape Navigator or Microsoft Internet Explorer).
2. Call up the IDES home page and select the language you require.

   If you do not know the Internet address of the IDES home page, ask your system administrator.
3. Choose *Internal Service*.
4. Choose *Management Service*.
5. Choose *Projects* → *Project Data Confirmation*.
6. Log on to the R/3 system as follows:

| Field name | Value |
|---|---|
| Login | WF-PS-1 |
| Password | WELCOME |
| Language | English |

7. Choose *Logon*.

   The *Project Data Confirmation* screen appears.
8. Choose *Individual Confirmation*.
9. To find the network for activity 5100, enter "Turbine" in the *Short text* field.
10. Choose *Find.*

The system lists all the networks whose names begin with the word *Turbine* on the left-hand side of the screen.

11. Select the network you want to process from the network list.

    The system lists all the activities in the network.

12. Choose activity *5100 Construction site assembly*.

    The system copies the network and activity numbers into the appropriate fields in the individual confirmation area.

13. Choose *Display*.

    The R/3 System checks the activity status and displays an appropriate message.

14. Enter the following data in the *Confirmation* section of the screen:

| Field | Data |
|---|---|
| Confirmation text | Assembly carried out |
| Complete | Select |

15. Choose *Save*.

    The system displays a message confirming that your confirmation has been saved.

16. Choose *Exit* to return to the *Ides* Home Page.

# Entering an Individual Confirmation

10. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project System* node, choose *Progress* → *Confirmation* → *Individual Confirmation* → *Enter* |
| **Transaction Code** | CN25 |

11. Enter the following data:

| Field | Data |
|---|---|
| Network | First network of your project T-10### |
| Activity | 5100 |

12. Choose .

13. Choose .

# Creating a Billing Document

## Usage

When you confirm the assembly of the construction site, you trigger the activation of the milestone for the final invoice. You can now bill the final invoice.

## Procedure

8. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Sales and Distribution* node, choose *Billing* → *Billing Document* → *Create* |
| **Transaction Code** | VF01 |

9. Enter the following data:

| Field | Data |
|---|---|
| Document | Your sales order number, generally defaulted by the system |

10. Select your order number, then choose .

11. Choose .

## Result

The billing request has been created, and the data have been updated in Financial Accounting and on the project. In the payment report, the system display the billing document in the line: *Cust. payt obl. Inv.* row.

To evaluate the data, change sessions and call up the Payment Report [Page 109] again.

# Period-End Closing with the Schedule Manager

## Purpose

Periodic processing, such as overhead application, interest calculation, results analysis, incoming orders, and settlement are executed on the basis of fiscal year periods. This is generally at the start of a given period for the preceding period.

*Schedule Manager* enables you to automatically schedule and execute period-end closing tasks across modules. *Schedule Manager* lets you analyze results, correct any errors, and repeat period-end closing for all incorrect data records.

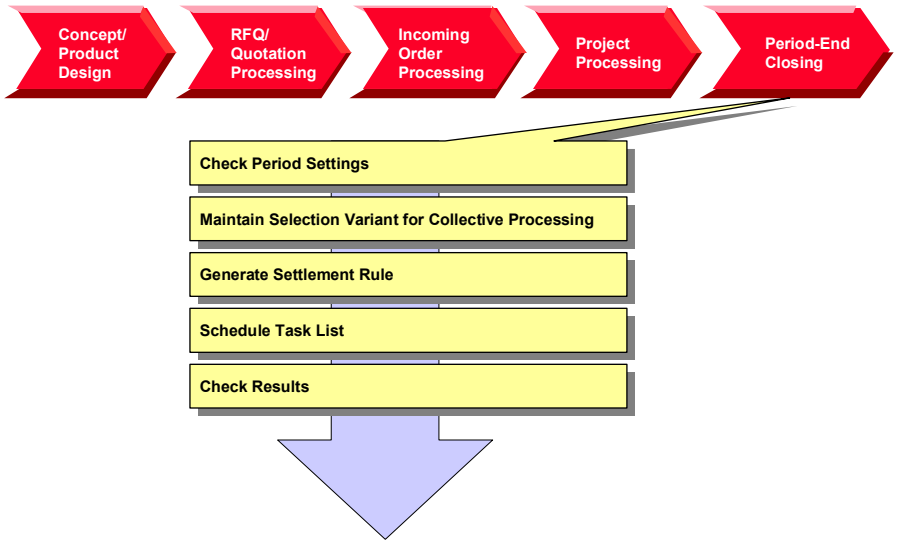
**You can find further information about the Schedule Manager in the SAP Library under**

*Financials → CO Controlling → General Controlling → Schedule Manager*

## Process Flow

1. You first check the period settings in the Schedule Manager and specify the objects for which you wish to execute period-end closing.
2. As no settlement rule has been maintained for your project, you schedule the task Generate Settlement Rule.
3. You then schedule the flow definition Z_130. This contains the following periodic tasks:
   - Overhead
   - Interest calculation
   - Cost forecasts
   - Results analysis
   - Incoming orders
   - Settlement
4. You monitor the results of the periodic task in the Job Monitor.
5. The person responsible receives a mail containing all information relevant to the period-end closing.

The following graphic illustrates the sequence of the necessary tasks:


Concept/ Product Design
RFQ/ Quotation Processing
Incoming Order Processing
Project Processing
Period-End Closing
Check Period Settings
Maintain Selection Variant for Collective Processing
Generate Settlement Rule
Schedule Task List
Check Results

# Calling Up the Schedule Manager

## Use

The individual tasks for the period-end closing are defined in a task list in the Schedule Manager. The task list contains different flow definitions, notes and individual activities. The activities that run automatically are defined in the flow definition.

## Prerequisites

In IDES, we have maintained the cross-module task list ZIDES. Different individual activities and flow definition Z_130 have been defined in this task list for the Project System.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project System* node, choose *Financials* → *Period-End Closing* → *Schedule Manager* |
| **Transaction Code** | SCMA |

   The Schedule Manager appears.

2. After you have read the instructions that the system displays for the Scheduler, choose *User notes off*.
3. Choose *Task list* → *Other task list*.
4. Enter the following data:

| Field | Data |
|---|---|
| Task list | ZIDES |

5. Choose .
6. Choose *Period-End Closing PS.*

   The various tasks for the Project System are summarized under this node. You will process the individual tasks sequentially.

7. Remain on this screen.

# Checking the Period Settings

## Usage

As period-end closing is largely automated, you first check the variables that have been used, such as the current period and the fiscal year.

## Procedure

1. Select the task for checking the period settings under the node *Period-End Closing PS*.
2. Choose .
3. Choose . In the dialog box, choose .
4. Select the entry PS_BUDAT.
5. Choose .

   The field is ready for input.
6. Enter the following data:

| Field | Data |
|---|---|
| PS_BUDAT | Today‘s date; MMDDYYYY |

7. Choose .
8. Change the following entries:

| Field | Data |
|---|---|
| PS_PERIOD | Current period |
| PS_YEAR | Current year |

9. Choose .

   The Schedule Manager appears.

# Maintaining Selection Variants for Collective Processing

## Usage

You generally execute periodic tasks (such as, overhead calculation, results analysis, settlement) using collective processing - for many projects, and in the background. With collective processing, the system selects the projects using a selection variant. You now make changes to the selection variant for your turbine project.

## Prerequisites

You have created collective variant Z13.

## Procedure

10. Select the task for determining the scope of the selection under the node *Period-End Closing PS*.
11. Choose .

    The *ABAP Variants: Initial Screen* appears.
12. Enter the following data:

| Field | Data |
|---|---|
| Variant | Z13 |

13. Choose *Change*.
14. If required, enter database profile `130000000000`, then choose .
15. If required, enter controlling area 1000, then choose .
16. Enter the following data:

| Field | Data |
|---|---|
| Project | T-10### |

17. Choose .
18. Choose until the Schedule Manager appears.

# Determining Settlement Rules

## Usage

You require results analysis keys or settlement rules for results analysis, incoming orders or settlement of your project. You can enter these master data either manually in the WBS elements or activities, or generate them automatically. In this case, you generate the settlement rules automatically for your turbine project.

## Prerequisites

In Customizing, you have defined strategy *10* for the generation of the settlement rule, and assigned this to project profile *2000 Standard Turbine*.

## Procedure

1. Use the drag and drop function to move the task *Autom.Generation of the Settlement Rule* into the daily overview. Select a time earlier than the current time.
2. To start the task immediately, select *Immediate Start*, then choose .

   The task has now been scheduled and activated for the current time in the daily overview. In the monthly overview, the day of the process flow has been selected.

### Monitoring the Period-End Closing in the Job Monitor

1. Choose .

   In the monitor, you see all of the activated and completed tasks. On the left side of the screen, you see the executed processing steps and the current processing status.
2. Double-click on the processing step *Automatic Generation of the Settlement Rule* to call up detailed information and any messages.

   The messages refer to WBS element T-10###.1.2, which is not used in this process.
3. Reduce the size of the message dialog box, until you can see the selection buttons for the detailed information.
4. Choose *Spool*.

   You now see the log with the detailed list. A settlement rule has been generated for billing elements T-10### and T-10###.12 to the relevant profitability segments. These WBS elements have also been assigned to results analysis key 130001. No settlement rule has been generated for any of the other WBS elements. Instead they have been assigned to settlement profile 130002 "Not for settlement" (Column *SProf*).
   Results analysis at billing element level includes all plan and actual values for lower-level WBS elements or orders/activities. For this reason, you settle only the billing elements.
5. To return to the Schedule Manager, choose .

# Executing Period-End Closing

## Use

Now that you have completed all of the preparations, you can plan the period-end closing. You can check the periodic tasks for errors in the Job Monitor.

## Procedure

1. Select the flow definition *PS Period-End Closing (Large)* and use Drag & Drop to move it into the daily overview. Select a time earlier than the current time.
2. To confirm both of the dialog boxes, choose .

   The process flow *PS Period-End Closing (Large)* has now been scheduled and activated for the current time in the daily overview. The day of this process flow has been selected in the monthly overview.

### Monitoring the Period-End Closing in the Job Monitor

1. Choose .
2. If required, confirm the message that you have received an express mail.

   In the monitor, you see all of the activated and completed tasks. On the left side of the screen, you see the executed tasks and the current processing status. To display the object list and check the processing status, double-click on a processing step.
3. Choose , until you see the processing step *Check objects in worklist*.

   The last processing step has been defined in flow definition Z-130 to the effect that user WF_PS_1 receives a message with a workflow item.

### Processing the Workflow Items

1. Call up the IDES R/3 System again.
2. Enter the following data:

| Field | Data |
|---|---|
| User | WF-PS-1 |
| Password | Welcome |

3. Call up the transaction as follows:

| Menu Path | *Office → Workplace* |
|---|---|
| **Transaction Code** | SBWP |

4. Choose *Inbox → Workflow → Grouped according to task.*
5. Click on *Generic Decision Task*.

   The workflow item is opened.
6. Select the workflow item, then choose .
7. In the *Job Monitor,* select *End Processing of the Worklist*.

### Checking the Results in the Schedule Manager

1. Switch to the IDES System, in which you have logged on with your user ID.
2. If required, call up the Schedule Manager again.
3. To refresh the calendar, choose .

   Period-end closing now has the status (*completed without errors*).

## Result

You have executed period-end closing for your turbine project. To evaluate the results, you can use various reports:

- In the Project System
  - Cost element report Z6P1 (actual / stock / commt / plan)
  - Cost element report 6PPW (project result)

    Choose *Logistics* → *Project System* → *Information System* → *Financials* → *Execute Report* → *Cost Element Report* to call the reports.
  - Hierarchy report 11ERL1F (incoming order)

    Choose *Logistics* → *Project System* → *Information System* → *Financials* → *Execute Report* → *Hierarchy Report* to call the report.
- In the profitability analysis
  - Profitability report IDES-100 (planned/actual comparison according to divisions)
  - Profitability report IDES-085 (incoming order)

    Choose *Accounting* → *Controlling* → *Profitability Analysis* → *Information System* → *Execute Report* to call the reports.

# Constructing a Power Station

## Purpose

In this process, you carry out project processing for the construction of a power station.

A typical production method for the construction of a power station is **Make-to-Order Production,** which involves considerable risks with regard to technical solutions, costs and dates.

This process is characterized by the following:

- When the order is placed, there is a **comprehensive quotation phase**.
- The power station is characterized by its **complexity** and **one-off** nature. This leads to a large portion of order-specific project and engineering activities. To depict the functional and spatial product structure, we require various methods from Engineering Data Management during the entire life cycle.
- The order lead time (from the quotation to the processing of the warranty) lasts several years. **Long lead times** require corresponding control mechanisms for individual activities and results. The success of the project is to be ensured through integrated planning, monitoring and controlling of the capacities, materials, costs and dates. You also need to plan and monitor the down payments and payments.
- The expenses required to convert the customer requests into the final product are very high. The task is made even more difficult by constant **changes**. The flexibility and speed with which an enterprise can react to these changes during the project are fundamental competitive factors. Engineering Change Management can be used as a crucial component, for example, with respect to product liability.

## Process Flow

During the project, you need to integrate the various business processes and approaches into the different phases of the value creation process. We detail the project management functions at the corresponding points in the process. However, we have summarized central functions, such as PS Cash Management.

Responsibility for the overall processing of the project is taken by IDES Canada. This consists of planning, engineering, procurement and construction of the power station.

1. Concept and Product Development [Page 167]

IDES Canada has the know-how required to build the power station. This know-how is managed in the SAP System using PDM functions. This means that knowledge and experience are stored in master data, such as the standard WBS, standard networks and technical locations.

2. Creating RFQs and Quotations [Page 175]

IDES Canada receives a request for quotation (RFQ) from North Energy Ltd / Calgary regarding the construction of a power station.

This is followed by an extensive quotation phase before the order is placed. The activities, resources and costs available for internal project planning, as well as the assessment of vendor quotations, ensures that you can select a quotation that is attractive from both a technical and economic perspective. There is a comprehensive basic engineering phase. Project-specific documents (specifications) are created, which describe the functional requirements of the power

station. When the order is placed, these documents provide the basis for a more detailed description in the technical departments.

3. Processing the Incoming Order [Page 208]

The project-specific data determined during quotations processing are checked against the incoming order, and then revised and refined as required. When the results of the technical inspection are ready, you report back to Basic Engineering, thereby releasing the project for additional processing in the specialist departments. You also create a project-specific cash budget planning.

4. Order Processing [Page 223]

Based on the specifications of Basic Engineering, we describe in detail the individual components of the power station, split by specialist area. On the basis of these specifications, you produce or procure the components.

The location at which the power station is to be constructed, corresponds to the construction site to which the power station parts and the tools are to be delivered. Assembly and commissioning take place at the construction site.

All of the cost centers involved in the project confirm their work. These confirmations are made using time sheets (CATS).

The detailed recording of components, the issuing of orders, and the control of deliveries and activities allows you to retain a clear cost overview so that the planned values from the cost estimate are not exceeded.

PS Cash Management [Page 256] valuates the planned cash flow for the project and monitors the cash flows on the credit and debit sides.

Periodic Processing [Page 269] in Project Controlling involves the creation of reports, which promote transparency of the value flows for the project.

You calculate the overhead costs for the cost estimate of the project costs.

The comparison of costs and revenues is important for determining the profitability of the project (results analysis, calculating the incoming orders).

Progress analysis lets you determine the progress of the project and its current status.

# Data Used in This IDES Process

If you want to be able to perform this business process, please ensure that the following data has been maintained in the R/3 system:

- Organizational Structures

  **See also:**

  Organizational Structures FI/CO [Page 161]

  Logistics Organizational Structures [Page 163]

- Master Data

  **See also:**

  Organizational Structures FI/CO [Page 162]

  Logistics Master Data [Page 164]

- Customizing Settings

  You can find further information in the prerequisites section for each of the individual processes or procedures.

# Organizational Structures FI/CO

| Field | Data | Usage |
|---|---|---|
| Company code | 4000 | |
| FM area | 4000 | |
| Operating concern | IDEA | |
| Controlling area | 2000 | CO North America |
| Cost center group | H4500 | Plant engineering and construction |
| Cost center group | H4510 | Project management |
| Cost center group | H4520 | Engineering |
| Cost center group | H4530 | Procurement |
| Cost center group | H4540 | Site processing/assembly |
| Cost center | 4-5100 | Project management |
| Cost center | 4-5200 | Engineering |
| Cost center | 4-5300 | Procurement |
| Cost center | 4-5400 | Assembly |

# Master Data FI/CO

## Cost Centers

| Cost center | Activity type | Price | Allocation cost element |
|---|---|---|---|
| 4-5100 (Project management) | 1463 (Manager hours) | 300 | 626300 (DIAA Managers) |
| 4-5200 (Engineering) | 1429 (Basic engineering) | 200 | 622000 (DIAA Engineering) |
| 4-5200 (Engineering) | 1430 (Detail engineering) | 150 | 622000 (DIAA Engineering) |
| 4-5300 (Procurement) | 5400 (Procurement - power plant) | 150 | 618100 (DIAA management) |
| 4-5400 (Assembly) | 4821 (Site supervisor hour) | 200 | 626300 (DIAA Managers) |
| 4-5400 (Assembly) | 4822 (Foreman hour) | 150 | 622100 (DIAA Foremen) |
| 4-5400 (Assembly) | 4823 (Construction worker hour) | 100 | 622200 (DIAA Auxiliary workers |
| 4-5400 (Assembly) | 1421 (Labor hour) | 100 | 619000 (DIAA Production |

## Activity Types

| | | |
|---|---|---|
| Activity type | 1421 | Labor hours |
| Activity type | 1429 | Basic engineering |
| Activity type | 1430 | Detail engineering |
| Activity type | 1463 | Project manager hours |
| Activity type | 5400 | Employee hours |
| Activity type | 4821 | Site supervisor hours |
| Activity type | 4822 | Foreman hours |
| Activity type | 4823 | Construction worker hours |

# Logistics Organizational Structures

| Field | Data | Usage |
|---|---|---|
| Plant | 4000 | Toronto |
| Work center | 4100 | Project management |
| Work center | 4200 | Assembly |
| Work center | 4300 | Procurement |
| Work center | 4000 | Engineering |
| Sales organization | 4000 | Toronto, Canada |
| Distribution channel | 40 | New business |
| Purchasing organization | 4000 | IDES Canada |
| Warehouse | 4000 | Warehouse, construction site |

# Logistics Master Data

## Project System

| Field | Data | Usage |
|---|---|---|
| Standard WBS | A-20000 | Power plant |
| Standard network | A-20201 | Basic engineering |
| Standard network | A-20301 | Power plant - control station technology |
| Standard network | A-20302 | Power plant - fuel supply |
| Standard network | A-20303 | Power plant - vessel |
| Standard network | A-20304 | Power plant - gas turbine |
| Standard network | A-20305 | Power plant - cooling system |
| Standard network | A-20306 | Power plant - steam turbine |
| Standard network | A-20307 | Power plant - generator |
| Standard network | A-20308 | Power plant - transformer |
| Standard network | A-20309 | Power plant - administration/social building |
| Standard network | A-20401 | Power plant - site equipment |
| Standard network | A-20402 | Power plant - earthwork |
| Standard network | A-20403 | Power plant - carcass |
| Standard network | A-20404 | Power plant - assembly |
| Standard network | A-20405 | Power plant - interior work |
| Standard network | A-20406 | Power plant - putting into operation |
| Standard network | A-20407 | Power plant - site clearance |

## Functional Location

| Field | Data | Usage |
|---|---|---|
| Material | IECPP | Power plant |
| Material | IECPP-01 | Control station technology |
| Material | IECPP-02 | Energy area |
| Functional Location | IECPP-02-01 | Vessel |
| Functional Location | IECPP-02-02 | Gas turbine |
| Functional Location | IECPP-02-03 | Steam turbine |
| Functional Location | IECPP-02-04 | Generator |
| Functional Location | IECPP-02-05 | Transformer |

| | | |
|---|---|---|
| Functional Location | IECPP-03 | Cooling system |
| Functional Location | IECPP-04 | Fuel supply |
| Functional Location | IECPP-04-01 | Port of shipping |
| Functional location | IECPP-02-01 | Mechanical handling/producing practice |
| Functional location | IECPP-05 | Administration/social building |

## Material for Sales View

| Field | Data | Usage |
|---|---|---|
| Material | IECPP-1-PP01 | Power plant |
| Material | IECPP-1-EN01 | Engineering |
| Material | IECPP-1-PR01 | Procurement |
| Material | IECPP-1-IN01 | Assembly |
| Material | IECPP-1-CP01 | Components |
| Material | IECPP-1-PC01 | Control station technology |
| Material | IECPP-1-FS01 | Fuel supply |
| Material | IECPP-1-VE01 | Vessel |
| Material | IECPP-1-TU01 | Gas turbine |
| Material | IECPP-1-CS01 | Cooling system |
| Material | IECPP-1-TU02 | Steam turbine |
| Material | IECPP-1-GE01 | Generator |
| Material | IECPP-1-TR01 | Transformer |
| Material | IECPP-1-BU/01 | Administration/social building |
| Material | IECPP-1-SP-01 | Construction site |

## Material for Internal View

| Field | Data | Usage |
|---|---|---|
| Material | IECPP-2-VE01 | Vessel |
| Material | IECPP-2-VE02 | Vessel pipe |
| Material | ICEPP-2-GE01 | Generator |
| Material | IECPP-2-GE11 | Rotor |
| Material for advance procurement | IECPP-2-GE12 | Bolts |
| Material for advance procurement | IECPP-2-GE13 | Sound protection |
| Material | IECPP-2-GE14 | Posts and beams |
| Material | IECPP-2-GE15 | Casing |

# Concept and Product Development

## Purpose

IDES Canada, the Canadian subsidiary of the North American IDES corporate group, has comprehensive knowledge of power plant construction.

This knowledge is included in templates and documents such as work breakdown structures, networks, BOMs, technical drawings and instructions. This know-how is managed in the SAP System using PDM functions. In other words, the knowledge and experiences are stored in master data and, for example, standard WBS, standard networks and functional locations.

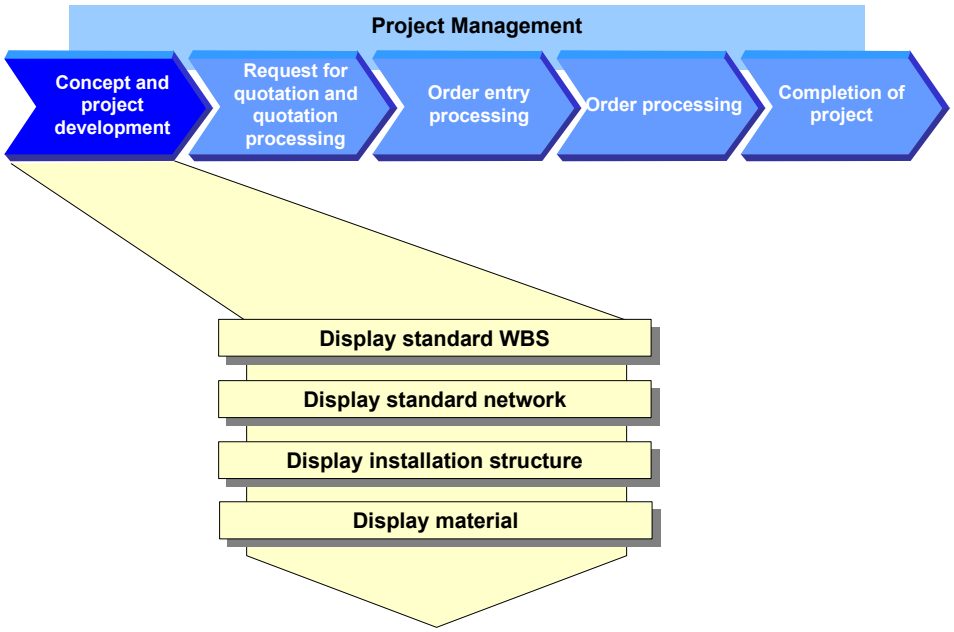
Project-independent definition of the templates ensures that when the quotation is processed, complete and correct information is available to estimate and limit technical and economical risks and to keep costing and planning efforts to a minimum.

The templates are amended regularly to reflect changes and improvements in technology and certain areas of business and experiences from operational business.

## Process Flow

You do not have to perform these steps as they have no influence on the further process. However, it helps your understanding if you make yourself familiar with the basic structures.

The following graphic clarifies the process:




1. Display Standard WBS [Page 169]

A standard work breakdown structure (WBS) serves as template for creating or enhancing an operative project structure. You can use this standard WBS to automatically generate a project with all the objects and hierarchical relationships required for processing a customer inquiry.

2. Displaying a Standard Network [Page 171]

   The planned process flow (for the construction of a power plant) is displayed in networks. Appropriate activities with their time-based dependencies are created for the individual tasks. These milestones are used within a project to control when certain phases in the process have been achieved. You can adapt predefined networks when you process a customer inquiry, a quotation or a sales order.

3. Functional Locations

   You can use functional locations to help you structure the operational systems. A project-independent structure for the power plant serves as template for processing quotations. It has to be adapted to suit the customer's needs for an operational project.

4. Displaying a Material [Page 173]

   Materials that are used in the construction of a power plant are stored in a material master record.

# Displaying a Standard WBS

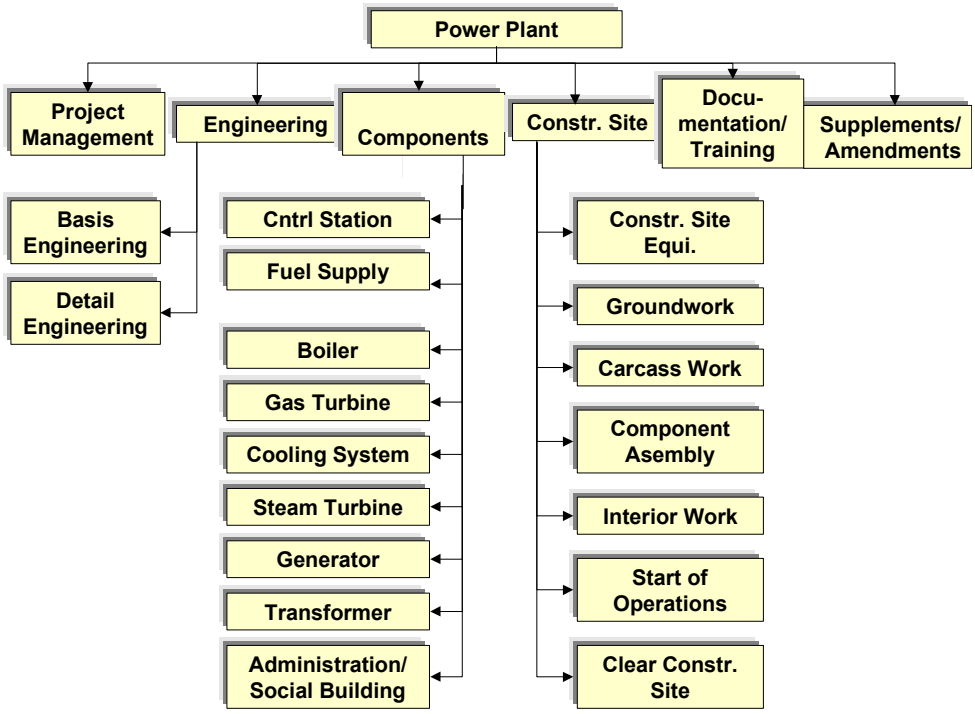
## Use

You have reflected your experience in standard structures so that large projects can be processed quickly and in a standard way. Project activities to be performed are displayed in the form of a hierarchy in the work breakdown structure.

You can find further information in the SAP Library under

*Logistics → PS Project System → Structures → Standard Structures → Standard Work Breakdown Structure (Standard WBS).*

The standard WBS A-20000 for the construction of a power plant has the following structure:




## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Project System → Basic data → Templates → Standard WBS → Display* |
| **Transaction Code** | CJ93 |

2. Enter the following data:

| Field | Data |
|---|---|
| Standard project definition | A-20000 |

3. Choose .

**Displaying a Standard WBS**

4. Choose the *Basic data* tab page.

   Here you can see information on the default organizational data and status profiles.

5. Choose the *Control data* tab page.

   Here you can see information on the default profiles for the project, accounting and scheduling.

6. Choose .

7. Choose .

   The *Hierarchy Graphic* screen appears.

# Displaying a Standard Network

## Use

The standard networks provide you with templates for internal and external activity or services and for operating resources that you require for activities. These networks form the base for planning, control and monitoring of dates, costs and resources in project execution.

You can find further information in the SAP Library under

*Logistics → PS Project System → Structures → Standard Structures → Standard Network.*

The planned process flow for the construction of a power plant is displayed in 15 standard networks. These networks form the template for the operative networks created with the project.

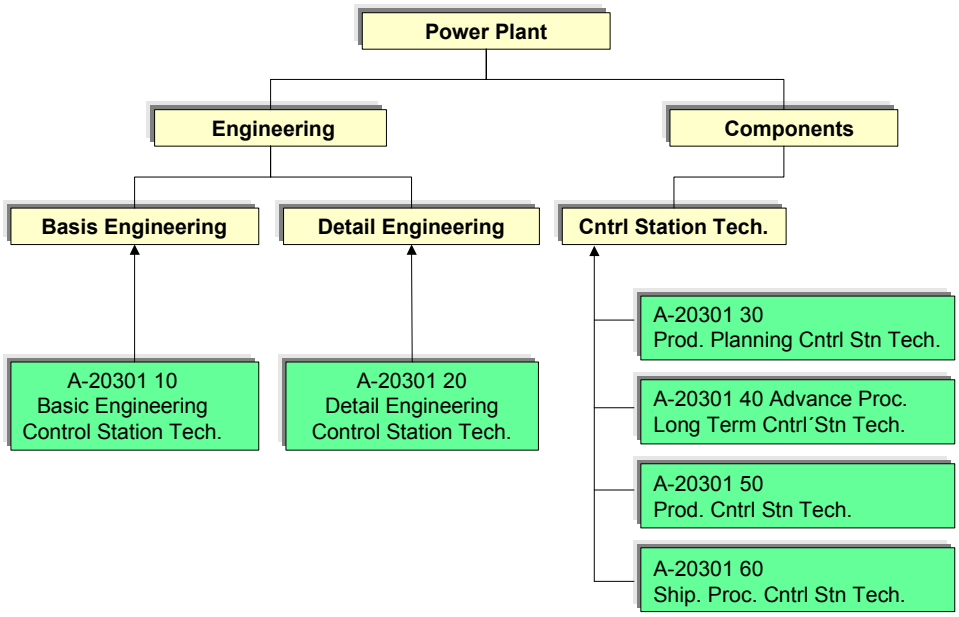
**See also:**

Logistics Master Data [Page 164]

The activities in the standard networks are linked to the standard WBS elements.

Planning using activities and assignments to WBS elements has important advantages:

For example, the network activities for control station technology are assigned to the following standard WBS elements:




## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | Choose *Standard network → Display* |

**Displaying a Standard Network**

| Transaction Code | CN03 |
|---|---|

2. Enter the following data:

| Field | Data |
|---|---|
| Standard Network | A-20301 (internal processing)<br>A-20307 (external processing) |

3. Choose *Activities*.

   You see an overview of the activities.

4. Choose the *Total* tab page.

   You can see the assignment of activities to standard WBS elements on the *Total* tab page.

5. Select an activity, then choose .

   The *Relationship Overview* screen appears.

6. Choose .

7. If you want to display the individual activities and their relationship to one another, choose .

   An overview screen displaying the network structure appears.

8. Choose .

9. Select an activity, then choose .

   The detail screen for this activity appears.

# Displaying a Material

## Use

Materials are stored in the material master record. These materials can be used in SD documents when a power plant is constructed or in project processing.

- Materials that are relevant to SD in this process are indicated by IECPP-1-####.
- Materials that are used in project processing are indicated by IECPP-2-####.

These two different types of material differ with regard to which data is maintained and the selection of the view. For example, 2 is set for MRP in the material master record whether the material is procured internally or externally.

**See also:**

Logistics Master Data [Page 164]

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current* |
| **Transaction Code** | MM03 |

2. Enter the following data:

| Field | Data |
|---|---|
| Material | IECPP-1-PP01 (SD material)<br>IECPP-2-VE01 (external procurement)<br>IECPP-2-GE01 (in-house production) |

3. Choose .
4. To select all views, in the dialog box, choose .
5. Choose .

   Depending on which views have been maintained for the material, further entries are required by the system.

6. Make the following entries, depending on the material:

| Field | Data |
|---|---|
| Plant | 4000 |
| Purchasing org. | 4000 |
| Sales org. | 4000 |
| Distr.Channel | 40 |

7. Choose .

# Processing RFQs and Quotations

## Purpose

The customer describes the most important requirements of the power plant in the RFQ. Since the probability of receiving an order is great, you decide to create a quotation.

The quotation contains the technical specifications in accordance with the customer's wishes and details on prices and dates. For this, you must carry out internal planning for the activities, resources and costs known of at this time.

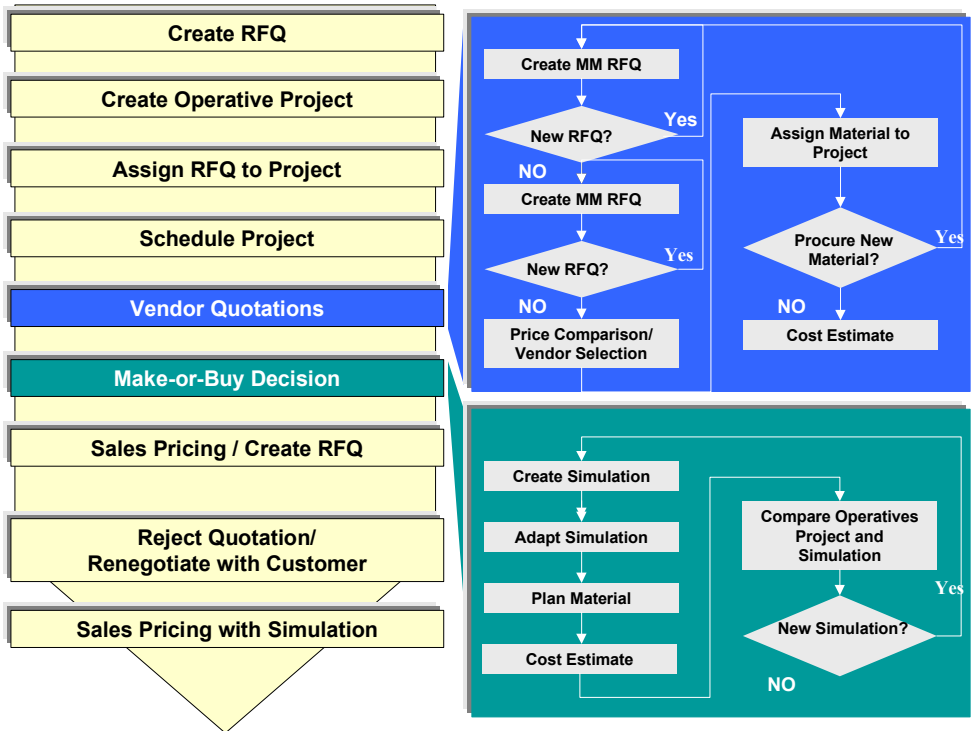
Quotations are collected from vendors for parts that have to be procured externally such as materials, accessories, tools or equipment. Furthermore, project-specific RFQs can be made to subcontractors in order to collect and compare dates and prices for services. This must be done so that the quotation price can be created in detail.

In practice, there are often negotiations with customers and vendors until a satisfactory compromise has been found for all parties.

In the planning phase particularly, knowledge about a specific project changes constantly. Quotation processing represents an iterative process: the individual steps can be carried out several times. However, management of project simulation and several quotations is necessary to keep the process clear and comprehensive and so that different scenarios can be compared to one another.

## Process Flow

The following graphic clarifies the process:




1. Creating an SD Inquiry [Page 177]

The process starts when a customer inquiry is entered. The customer is, for example, the Canadian corporate group North Energy Ltd / Calgary.

2. Creating an Operational Project [Page 179]

   You decide to create a project structure for the power plant and assign the RFQ to the project account for the purposes of quotation creation (planning, scheduling and costing).

4. Preliminary Project Planning (Structures, Work, Dates)

   In order to be able to make a quotation, preliminary project planning must have taken place. For this reason, project structures (WBS, networks) are adapted to suit the current RFQ. WBS elements are deleted or created. Duration, work, sequence, components etc. are adapted in the networks.

   The ideal case that standard structures can implemented unchanged is used in the example process, so the scenario mentioned above cannot be used.

   In the next step, you schedule the project for the first time ( Scheduling a Project [Page 182] ) to determine whether the delivery date can be kept.

5. Requests for Quotations [Page 184]

   As well as calculating the cost of in-house services, you also have to collect prices for components to be procured externally in a request for quotation.

   Using the *Boiler* component as an example, collect quotations from vendors and adapt your project planning accordingly.

6. Make or Buy Decision [Page 193]

   You have to make a make or buy decision for the generator, for example, because it can either be manufactured in-house or procured externally. To do this, create a simulation (in-house production) that will then be compared to the operational project.

   Due to cost issues, you decide to procure the generator externally.

7. Create Sales Price Calculation / SD Quotation [Page 202]

   You use sales pricing to create a resource-related quotation on the basis of detailed project planning. The quotation contains the technical specifications in accordance with the customer's wishes and details on prices and dates.

8. Rejecting a Quotation / Renegotiating [Page 205]

   The customer has special requests and requirements so the generator is manufactured in-house after all.

9. Sales Pricing Using Simulation/Creating a Quotation [Page 206]

   Using sales pricing, you create a new quotation based on the results of negotiations.

## Result

Quotation processing ends when the customer places an order (letter of indent).

# Creating an SD Inquiry

## Prerequisites

The following settings have been made in Customizing for *Sales and Distribution*:

- Sales document type ZEC1 (IECPP inquiry)
- Item category ZEC1

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales and Distribution* → *Sales* → *Inquiry* → *Create* |
| **Transaction Code** | VA11 |

2. Enter the following data:

| Field | Data |
|---|---|
| Inquiry type | ZEC1 (IECPP inquiry) |
| Sales organization | 4000 |
| Distribution channel | 40 |
| Division | 00 |

3. Choose .
4. Enter the following data:

| Field | Data |
|---|---|
| Sold-to party | 4000 |
| Purch. order no. | A-20### (# stands for any number) |
| PO date | Today's date |
| Valid from | Today's date |
| Valid to | Today's date +6 months |
| Req. deliv.date | Today's date +4 years |
| Material | IECPP-1-PP01 |
| Order quantity | 1 |

5. Choose .
6. In the dialog box, choose .
7. To confirm possible warning messages, choose .
8. Make a note of the inquiry number.

# Creating an Operational Project

## Use

You create a project structure for the power plant for planning and costing a quotation.

Since your company usually manages the construction of power plants by using projects, a standard project structure already exists in the system. All you have to do is to adapt this standard structure to suit the specific requirements of your current project. To do this, copy the standard project into an operational project.

Use the *Project Builder* to create the project. You can find further information in the SAP Library under *Logistics* → *Project System* → *Structures* → *Project Builder.*

## Prerequisites

Standard project A-20000 is available.

The following settings have been made in Customizing for *Project System*:

- Project profile ZECPP01
- Network profile ZECPP01

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Project Builder* |
| **Transaction Code** | CJ20N |

2. Click on *Templates* in the lower part of the screen containing the worklist and the templates.
3. Expand the *Standard templates* node.
4. Call up the *Include in Templates* dialog box by double-clicking on *Standard project definitions*.
5. Enter the following data:

| Field | Data |
|---|---|
| Standard project definition | A-20000 |

6. Choose .
7. In the *Templates* area of the screen, select the standard project definition *Power Plant A-20000* and drag it into the structure tree part (upper part) of the screen by keeping the left-hand mouse button pressed.

   The *Create Project* dialog box appears.
8. Enter the following data:

| Field | Data |
|---|---|
| Project def. | A-20### |

| | |
|---|---|
| Description | Power Plant A-20### |
| Finish date | Today´s date + 4 yaers |
| Project profile | Empty |

The finish date corresponds to the desired delivery date from the inquiry/RFQ.

9. Choose .

   The first release milestone is triggered when you create the project.

10. Choose .

    You can now see various objects in the structure display that have been copied from the standard project.

    Project definition

    WBS elements

    Activities

    Milestones

11. Choose .

## Result

When a project is created, the release milestone *Release activities* (in activity *Plant engineering* of WBS element *Basic Engineering*) releases all activities up to the next release milestone *Down payment* (in activity *Acceptance* of WBS element *Basic Engineering*).

# Assigning a Project Inquiry to an Account

## Use

After you have created your project, assign your project inquiry to an account. Since you want to create a quotation for your inquiry on the basis of the project data, check whether the settings in the quotation are correct.

## Prerequisites

You must have entered a customer inquiry in the system and you must have created a project.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Inquiry* node, choose *Change* |
| **Transaction Code** | VA12 |

2. Enter the following data:

| Field | Data |
|---|---|
| Inquiry | Your noted inquiry number |

You can search for the document number of your inquiry using the purchase order number A-20###.

3. Choose .
4. Call the item data by double-clicking on the item with material IECPP-1-PP01.
5. Choose the *Account assignment* tab page.
6. Enter the following data:

| Field | Data |
|---|---|
| WBS element | A-20### |

7. Choose the *Sales B* tab page.

   DIP (dynamic item processor) profile ZECPP01 has been maintained for creating offers.

8. Choose .

# Scheduling the Project

## Use

You schedule the project for the first time to determine whether the delivery date can be kept.

The project planning board enables you to plan using the work breakdown structure and the network. Basic dates in the project structure are determined by the dates for each activity and compressed into the structure. Bottom-up planning: networks are always scheduled forwards and backwards in time. Backward scheduling is determined as the starting direction in which scheduling takes place.

There are several options for defining control parameters for scheduling. In this example, you choose a different setting than that which is set in Customizing for *Project System*. You decide that the work breakdown structure should determine the dates since, at the moment, the required delivery date is the only known date for the definition of the project.

## Prerequisites

WBS scheduling profile IECPP1 has been maintained and entered in project profile IECPP01 in Customizing for *Project System*.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project* node, choose *Project Builder*. |
| **Transaction Code** | CJ20N |

2. In the *Worklist* screen area, choose *Last projects processed*.
3. Open your project by double-clicking on *Power Plant A-20###*.
4. To expand the project completely, choose .
5. Choose .

   The *Project Planning Board* screen appears.
6. Choose *Settings* → *Options*.

   A dialog box appears.
7. On the *Scheduling* tab page, enter the following data:

| Field | Data |
|---|---|
| Schedul. method | WBS determines dates |

8. Choose .
9. Choose .
10. Choose .
11. Choose .

## Result

You can see red horizontal bars in the overview for the project planning board. These indicate critical paths. In other words, you must adhere to the times planned (no buffer). If you do not, you will cause delays.

The required delivery date can be kept since the start of the project is in the future.

# Requests for Quotation

## Purpose

To be able to calculate a quotation price, you require, amongst other things, the price of the components that have to be procured externally.

The request for quotation can be illustrated by using a boiler as an example. You collect quotations and choose a vendor.

## Process Flow

1. Determining a Delivery Date [Page 185]

   You have to make a note in the project of the requirement date calculated by scheduling.

2. Create MM Request for Quotation [Page 186]

   Create a request for quotation (RFQ) in purchasing. Assign a collective number to the request for quotation. The collective number helps you when you want to assign requests for quotations to bid invitations. You enter the collective number once and the system then copies it for every request for quotation that you create for a bid invitation.

2. Create MM Quotation [Page 188]

   After you have collected the quotations from the different vendors, enter them in the system using the collective number.

3. Comparing Prices [Page 189]

   Then you compare the prices and decide on one of the vendors. To do this, you use the price comparison list to compare the prices of all the quotations in your collective request for quotations. The quotations are listed in this price comparison list as items in ascending/descending order.

4. Assigning Materials in a Project [Page 190]

   So that complete data is available for costing purposes, the materials for the boiler have to be assigned to the appropriate activity and be assigned the price demanded by your chosen vendor.

5. Costing [Page 192]

   You can cost your project using the data that is updated in the project.

# Determining a Delivery Date

## Use

You have to make a note in the project of the requirement date calculated by scheduling.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project* node, choose *Project Builder*. |
| **Transaction Code** | CJ20N |

2. Open your project by double-clicking on *Power Plant A-20###* in the area of the screen containing the work list.
3. Expand the following nodes in the project:

   Power plant

   Components

   Vessel

   Vessel
4. Select the *Transportation vessel* activity.
5. Choose the *Dates* tab page.
6. Make a note of the earliest start date.

   This date is the desired delivery date.

# Creating an MM Request for Quotation

## Use

You create a request for quotation with collective number, material and requirement date. In practice, the specifications and plans, for example, would also be sent in addition to the request for quotation.

## Prerequisites

The vendor master record has been maintained.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Purchasing* → *RFQ/Quotation* → *Request for Quotation* → *Create* |
| **Transaction Code** | ME41 |

2. Enter the following data:

| Field | Data |
|---|---|
| RQF type | AN |
| Quotation deadline | Today + 2 months |
| Purch. organization | 4000 |
| Purchasing group | 010 |

3. Choose .
4. Enter the following data:

| Field | Data |
|---|---|
| Coll.no | IECPP |

5. Choose .

   An overview screen displaying the items appears.

6. Enter the following data:

| Item | Material | RFQ quantity | Delivery date |
|---|---|---|---|
| 010 | IECPP-2-VE01 | 1 | Earliest start date from network *vessel*, activity *Transportation Vessel* |
| 020 | IECPP-2-VE02 | 10 | Earliest start date |

7. Choose to go to the screen displaying a selection of vendors.
8. To confirm possible warning messages, choose .
9. Enter the following data:

| Field | Data |
|---|---|
| Number of vendor | 4000 |

10. Choose .

    The system copies the address data from the vendor master record.

11. If necessary, in the dialog box, select language EN for the vendor and choose .
12. To confirm possible warning messages, choose .
13. Choose .
14. Make a note of the inquiry number.

    The *Create RFQ: Vendor Address* screen appears.

15. Create a request for quotation for the following vendors:

| Field name | Value |
|---|---|
| Number of vendor | 4010 |
| Number of vendor | 4020 |

16. Make a note of each RFQ number.
17. Choose .

## Result

You have assigned the vendor RFQs using the collective number of a collective request for quotation.

# Creating an MM Quotation

## Use

After a while, the quotations arrive from the vendors. You enter the quotations in the system and use the collective number to help you do this.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *RFQ/Quotation* node, choose *Quotation* → *Maintain* |
| **Transaction Code** | ME47 |

2. Enter the number of the request for quotation for vendor 4000.

   You can use the collective number IECPP to help you search. Choose the possible entries button and then the *Requests for Quotation per Collective Number* tab page.

3. Choose .

4. Enter the following data:

| Material | Field | Data |
|---|---|---|
| IECPP-2-VE01 | Net price | 10,000,000 |
| IECPP-2-VE02 | Net price | 700,000 |

5. Choose .

   The quotation for the RFQ for vendor 4000 has been maintained.

6. Repeat this procedure for the remaining RFQs and enter the following data:

| Vendor | Material | Net price |
|---|---|---|
| 4010 | IECPP-2-VE01 | 11,000,000 |
| | IECPP-2-VE02 | 650,000 |
| 4020 | IECPP-2-VE01 | 11,500,000 |
| | IECPP-2-VE02 | 630,000 |

7. Choose until the overview tree appears.

# Comparing Prices

## Use

After the quotations have arrived from the vendors and been entered in the system, you can run a price comparison in order to determine which is the cheapest quotation.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Quotation* node, choose *Price Comparison*. |
| **Transaction Code** | ME49 |

2. Enter the following data:

| Field | Data |
|---|---|
| Purchasing organization | 4000 |
| Collective request for quotations | IECPP |

   By entering the collective number IECPP, you can select all the quotations in the current collective request for quotations.

3. Choose .

## Result

The system compares the prices. The following data is displayed:

- the variance of each quotation in the comparison, expressed as a percentage
- the price and value per item
- the total value

Vendor 4000 offered the cheapest quotation.

# Assigning Materials in a Project

## Use

You assign the boiler materials to the appropriate activity and assign the cheapest quotation price from the request for quotations from the vendors to them.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Project Builder* |
| **Transaction Code** | CJ20N |

2. Open your project by double-clicking on *Power Plant A-20###* in the area of the screen containing the work list.
3. Expand the following nodes in the project:

   Power plant

   Components

   Vessel

   Vessel

4. Select the *Transportation vessel* activity.

   The detail screen for the activity appears in the area of the screen containing the worklist.

5. In the *Identification and View Selection* area of the screen, choose .

   The component overview appears in the worklist.

6. Enter the following data:

| Field | Data |
|---|---|
| Material | IECPP-2-VE01 |
| Rqmts qty | 1 |
| Item category (I) | L |
| Material (item 020) | IECPP-2-VE02 |
| Rqmts qty | 10 |
| Item category (I) | L |

7. Choose .

   The *Reservation* dialog box appears twice.

8. Select *Purchase requisition + Res. WBS element* and choose .

By making this choice, you activate the material to be accounted for in project stock and determine that a purchase requisition is generated directly (without an MRP run). The purchase requisition is created when the activity is released.

The system includes the components *Boiler (IECPP-2-VE01)* and *Boiler pipe (IECPP-2- VE02)* in the structure overview underneath the activity *Transportation vessel.*

9. Select the *Boiler* component in the structure overview.

   The detail screen for the component appears in the area of the screen containing the worklist.

10. On the *Purchasing data* tab page, change the price as follows:

| Field name | Value |
|---|---|
| Price/currency | 10,000,000 |

11. Select the *Boiler pipe* material in the structure overview.

12. On the *Purchasing data* tab page, change the price as follows:

| Field name | Value |
|---|---|
| Price/currency | 700,000 |

13. Choose .

14. Do not exit the *Project Builder*.

# Costing

## Use

You have scheduled internal and external services for the activities in the network.

Taking the dates into account, the system calculates the planned costs using the valuation records or the prices for internal and external services and the required operating resources.

The time-based distribution of the planned costs is the result of the time-based distribution of the planned services and the operating resources for the individual activities.

The costs of the activities are assigned to the WBS elements by assigning the activities.

You can find further information in the SAP Library under *Logistics* → *Project System* → *Structures* → *Project Planning Board and Logistics* → *Project System* → *Costs*.

## Prerequisites

The controlling area must have been set to 2000. In a North American corporate group, cost accounting that takes place across different company codes is performed using the currency USD (U.S. dollars).

You are still in the Project Builder.

## Procedure

1. Open your project by double-clicking on *Power Plant A-20###* in the area of the screen containing the work list.
2. If the project is not completely expanded, choose .
3. Choose .

   The *Project Planning Board* screen appears.
4. Choose .
5. Choose .
6. Draw the dividing line between the hierarchy display and the graphical display further to the right until the *Project Costs* column appears.
7. Choose .

## Result

The system has determined the planned project costs.

# Make or Buy Decision

## Purpose

The standard structure presumes that you want to procure your generator externally since a standard version of this component is being dealt with here.

IDES Canada also produces generators in-house. If you want to be able to compare both these options, create a simulation for this alternative.

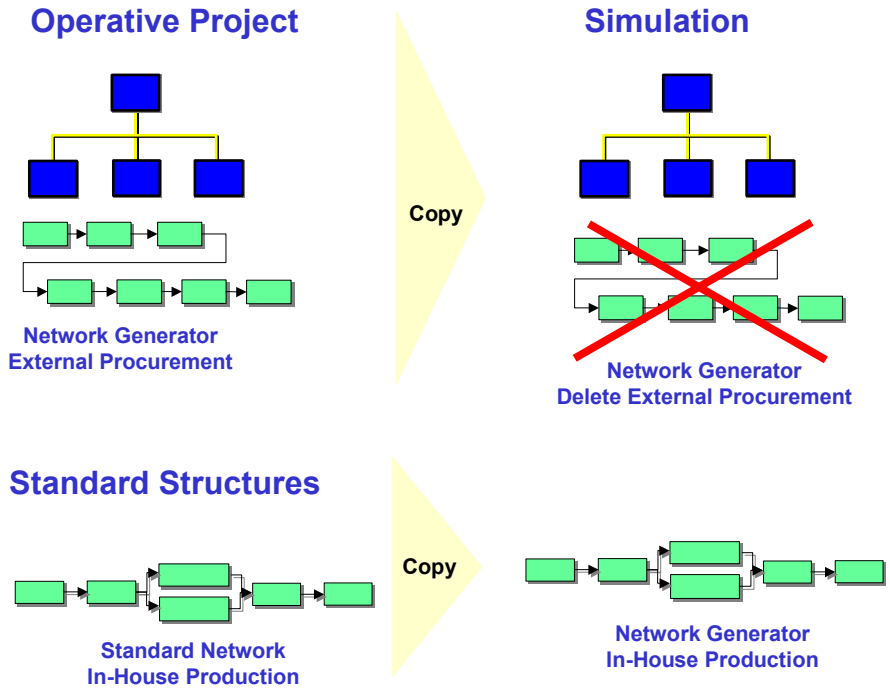
## Process Flow

1. Creating the Simulation [Page 195]

   Check whether in-house production of the generator is cheaper than external procurement. Create a simulation to do this.

2. Changing the Network Generator [Page 196]

   The simulation is a copy or the operative project. The network for the generator has to be changed so that activities for in-house production have to be planned instead of activities for external procurement.




3. Planning Material Costs [Page 199]

   You have to plan costs for in-house production of the generator.

4. Comparing the Operative Project With the Simulation [Page 201]

   You compare the costs of your operative project with those of the simulation to decide which project you want to use as a base for the creation of a quotation.

## Result

On the grounds of the cost situation, you choose the operative project – and therefore also external procurement of the generator.

# Creating a Simulation

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project* node, choose *Simulation* →*Transfer Project* |
| **Transaction Code** | CJV4 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project definition | A-20### |
| Operative data -> Version | Select |
| Target version | SIM20### |

3. Choose .

   A dialog box appears.

4. To create the simulation, choose *Yes.*

5. Choose .

## Result

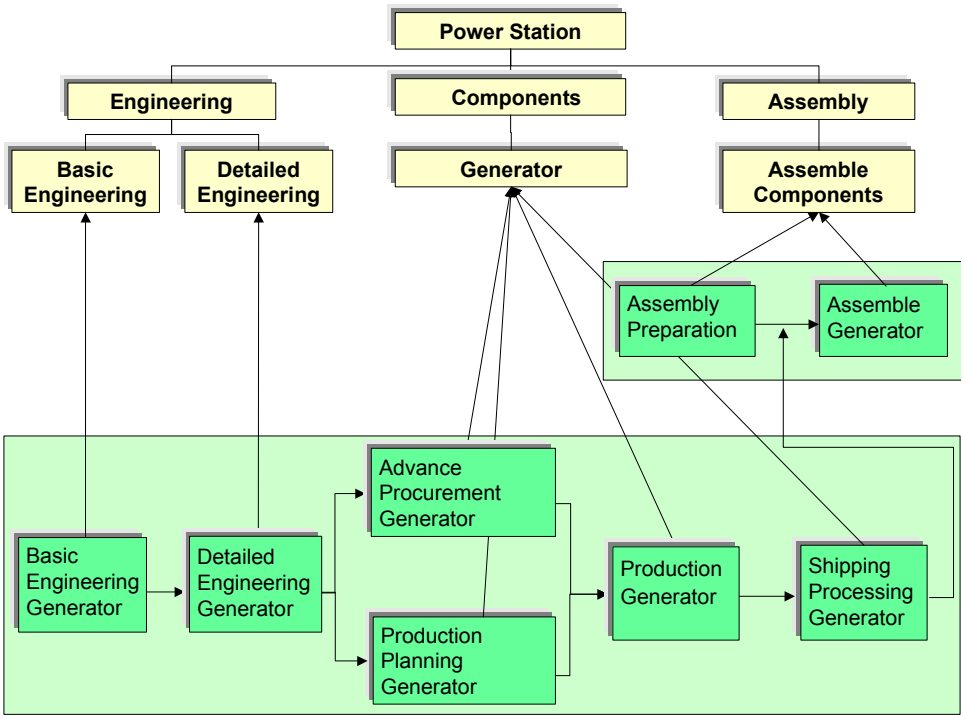
The system has created a copy of your project as a simulation version. You receive a log.

# Changing the Network for the Generator

## Use

The network for the generator has to be changed so that activities for in-house production have to be planned instead of activities for external procurement.

First of all, delete all the activities that belong to the *Generator* network. You can find these under the WBS elements *Basic Engineering*, *Detail Engineering* and *Generator*. Then you can copy a standard network for in-house production and assign the *Basic Engineering*, *Generator* and *Detail Engineering Generator* activities to the appropriate WBS elements. Furthermore, change the relationship of the *Sales Processing Generator* activity. Assembly is to become part of this activity. Therefore, a successive, or follow-up relationship ensues for the *Assembly Generator* activity (please see graphic below).




## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Simulation* node, choose *Change.* |
| **Transaction Code** | CJV2 |

2. Enter the following data:

| Field | Data |
|---|---|
| Vers. key | SIM20### |
| Project def. | A-20### |

3. Choose *Open project*.

### Deleting an Activity

1. Select the following activities:

| Activity | Assigned to WBS element |
|---|---|
| Basic Engineering Generator | Basic Engineering |
| Detail Engineering Generator | Detail Engineering |
| Activity 030 RFQ/Inquiry Generator to 070 Shipping Processing Generator | Generator (below WBS element component) |

You can select more than one activity by keeping the Cntrl key pressed.

2. Choose *Edit* → *Delete* → *Deletion flag.*
3. In the dialog box, choose *Yes*.

   The systems flags the activities for deletion.

### Creating a New Activity

1. Select WBS element *Generator.*
2. Choose .

   A structure overview with templates appears on the left-hand side of the screen.
3. Call the dialog box for copying to templates by double-clicking on *Standard networks*.
4. Enter the following data:

| Field | Data |
|---|---|
| Standard network | A-20301 |

5. Choose .

   The network is copied to the structure overview as a template.
6. Copy the activities and relationships to the simulation below the WBS element *Generator* by double-clicking on the standard network A-20301.

### Processing an Activity

1. Select all the activities that have just been added.
2. Choose .

   The detail screen for the first activity appears.
3. For each activity, replace the short text *Control station technology* with *Generator*.
4. To scroll back to the activity *Basic Engineering Generator*, choose .
5. On the *Assignments* tab page, change the WBS element that has been assigned for the *Basic Engineering Generator* and *Detail Engineering Generator* as follows:

| Activity | WBS element |
|---|---|

**Changing the Network for the Generator**

| | |
|---|---|
| Basic Engineering Generator | A-20###-02-01 |
| Detail Engineering Generator | A-20###-02-02 |

6. Choose ✔.

### Changing the Relationship

1. Select the activity *Transportation generator*.

   By copying the relationships from the control station technology standard network, this activity follows up activity 20 for the assembly of the control station in the network *Assembly Components*.

2. Choose .
3. To change the relationships, choose the *Successors* tab page.
4. Enter the following data in the upper area of the table:

| Field | Data |
|---|---|
| Activity | 80 |

   You have set this activity in a follow-up relationship to the activity for the assembly of the generator.

5. Choose ✔.
6. Choose .

# Planning Material Costs

## Use

If you copy the *Control station technology* standard network, the *Control station technology* component that has been assigned to it is also copied. The components are not assigned to the activities until later for the generator. For this reason, you plan the costs using material planning and delete the component *Control station technology.*

This planning is important for the quotation costing which has to be created at this point in time using the project.

The planned values are reduced when components are assigned later on. This avoids planning material costs twice.

## Prerequisites

If you want to be able to use material planning, you must have entered a material cost element in Customizing for *Project System* on the tab page *Activities*.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Simulation* node, choose *Change.* |
| **Transaction Code** | CJV2 |

2. Enter the following data:

| **Field** | **Data** |
|---|---|
| Vers. key | SIM20### |
| Project def. | A-20### |

3. Choose *Open project*.
4. Select the operation for the production of the generator within the WBS element for the generator.
5. Choose .

   The detail screen for the activity appears.
6. Choose the *Assignments* tab page.
7. Enter the following data:

| **Field** | **Data** |
|---|---|
| Material planning | 8.000.000 |

8. Choose .

## Deleting Assigned Components

1. Choose *Goto* → *Component overview*.

   The system opens the component overview in the lower part of the screen.
2. Select the component IECPP-2-PC01 (Power control center).
3. If you want to delete the component, click the right-hand mouse button and choose *Delete*.
4. In the dialog box, choose *Yes*.
5. If you want to close the component overview, choose icon X.

## Rescheduling and Recosting a Project

1. Choose .
2. To reschedule the dates, choose .
3. To calculate the costs for the simulation, choose .

   The system calculates the costs.

   It's not allowed to calculate costs of activities flagged for deletion.

   An identical warning message appears.
4. To confirm the warning message, choose .
5. Choose .

# Comparing the Operative Project With the Simulation

## Prerequisites

The PS information profile ZECPP0000001 and the status selection profile ZECPP01 (IECPP without deletion flag) have been defined in Customizing for *Project System*.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Information System* → *Structures* → *Structure Overview* |
| **Transaction Code** | CN41 |

2. In the dialog box, enter the following data:

| Field | Data |
|---|---|
| PS Info Profile | ZECPP0000001 (IECPP: dates and costs/versions) |

3. Choose ✔.

4. Enter the following data on the initial screen:

| Field | Data |
|---|---|
| WBS element | A-20###-03-07 |
| Additional selection criteria | Delete |
| Current data | Select |
| Version data | Select |
| Structure-related | Select |
| Project version | SIM20### |

5. Choose .

## Result

You can see the comparison of costs for project A-20### and simulation SIM20###.

On the grounds of the cost situation, you choose the operative project – and therefore also external procurement of the generator.

# Sales Pricing / Creating an SD Quotation

## Use

As a rule, you usually perform a one-off, customer-specific service in a customer project. Due to the uniqueness of the project, you can rarely use standard prices to determine the sales price. You can determine a sales price on the basis of the planning data in the project and SD pricing.

The system compresses the planned costs in the sales price calculation to dynamic items according to cost types and uses material determination for the dynamic item processor profile to change these in key form to SD items.

This view of the sales price basis uses the dynamic item processor to display compressed planned costs from the billing structure, the so-called sales price basis items. You can process the sales price basis items (dynamic items) in this view and accept the sales price determination completely, partly or not at all.

SD pricing is used to calculate the sales price. You can use SD conditions to help you process the individual or header items in the sales price calculation. You enter a risk and gain surcharge to determine the sales price.

You can find further information in the SAP Library under *Logistics* → *Project System* → *Revenues and Earnings* → *Sales Pricing and Quotation Creation* → *Sales Pricing in the Project System.*

## Prerequisites

The sales document type ZEC2 (IECPP: quotation) must have been maintained in Customizing for *Sales and Distribution.*

A dynamic item processor profile (DIP profile) must have been maintained in the customer inquiry. Dynamic item processor profile (DIP profile) ZECPP01 (IECPP: quotation for power plant) has been entered for this purpose in Customizing for *Project System*.

For the purpose of controlling quotation creation, this DIP profile must have been entered on the *Sales B* tab page of the item detail view in the SD order.

The following settings have been made in Customizing for *Sales and Distribution*:

- Pricing procedure ZECPP2 (IECPP: quotation)
- Condition type ZEC3 (risk)
- Condition type ZEC4 (profit/gain)

The following materials have been entered in the material master record:

- IECPP-1-EN01 (engineering)
- IECPP-1-PR01 (procurement)
- IECPP-1-IN01 (assembly)
- IECPP-1-CP01 (components)

A customer inquiry with at least one item that has been maintained and assigned to a billing element must exist. The system determines the SD data for sales pricing from this inquiry item.

Cost element group EC_SALARY must have been maintained in Customizing for *Project System*.

You have planned costs (in concordance with cost elements) for your project.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Project System* node, choose *Financials* → *Planning* → *Sales Pricing* |
| **Transaction Code** | DP81 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project definition | A-20### |
| Additional selection criteria | Delete |
| Version | Delete entry SIM20### |

3. Choose *Sales pricing.*
4. Choose .

   The cost structure for the project is displayed in the upper part of the sales pricing screen. Settings to determine how the cost structure is displayed (3 levels in the project structure with cost element groups below) are made in the DIP profile.

5. To copy the object descriptions to the item overview, choose *Extras* → *Settings*.
6. Choose the *Description* tab page and then the *Object* tab page, select the option *Description* and choose .
7. Double-click on the object description *Power plant*.

   The planned costs are distributed to the sales materials in the lower part of the screen.

### Processing the Sales Price View

1. Choose *Sales price.*

   The sales price basis is converted to the order items. This takes place in accordance with the settings in the DIP profile.

2. To display the order items, choose .
3. If you double-click on *PS: Quotation,* the pricing procedure that you can process appears in the lower part of the screen.
4. Enter the following data for the risk and profit surcharge:

| CnTy | Rate |
|---|---|
| ZEC3 (IECPP: risk) | 5 |
| ZEC4 (IECPP: profit) | 3 |

5. Choose .

### Creating a Quotation

1. Choose *Quotation*.

2. Choose *Yes* in the *Create Quotation* dialog box.
3. Enter the following data:

| Field | Data |
|---|---|
| SPc short text | Quotation IECPP |

4. Choose .

   The *Change Quotation: Overview* screen appears.

5. Enter the following data for the quotation deadline:

| Field | Data |
|---|---|
| Valid to | Today's date +6 months |
| Purch. order no. | A-20### |

6. Choose .
7. Note the number of the quotation.

## Result

You have created a quotation based on the planning data in the project. You can send this quotation to your customer.

# Rejecting a Quotation / Renegotiating

## Use

In the course of contractual negotiations, agreements are reached that require a new quotation to be made. The old quotation is cancelled.

## Prerequisites

The reason for rejection ZEC (negotiations, new quotation) must have been maintained in Customizing for *Sales and Distribution*.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales and Distribution* → *Sales* → *Quotation* → *Change* |
| **Transaction Code** | VA22 |

2. Enter the following data:

| Field | Data |
|---|---|
| Quotation | Document number already noted |

You can search for the document number of your inquiry using the purchase order number A-20###.

3. Choose .
4. Choose the *Reason for rejection* tab page.
5. Enter the following data for each item:

| Field | Data |
|---|---|
| Reason for rejection | Subsequent negotiation, new quotation (ZEC) |

6. Choose .

# Creating a New Quotation on the Basis of the Simulation Version

## Use

In this example, the customer decides that the technical statistics and performance of the generator should be changed. Efficiency and performance are to be increased and it therefore becomes necessary to manufacture this generator in-house.

A similar scenario has already been costed in simulation SIM20###, so it only remains to recalculate a new sales price. This time, however, on the basis of the simulation.

## Prerequisites

**See also:**

Sales Pricing / Creating a Sales Quotation [Page 202]

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Financials* → *Planning* → *Sales Pricing* |
| **Transaction Code** | DP81 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project definition | A-20### |
| Pricing date | Today's date |
| Version | SIM20### |

3. Choose *Sales price.*

   The sales price basis is converted to the order items. This takes place in accordance with the settings in the DIP profile.

4. If you double-click on *IECPP: Quotation,* a pricing procedure that you can process appears in the lower part of the screen.

5. Enter the following data for the risk and profit surcharge:

| CnTy | Rate |
|---|---|
| ZEC3 (IECPP: risk) | 5 |
| ZEC4 (IECPP: profit) | 3 |

6. To create a quotation, choose *Quotation*.

7. Choose *Yes* in the dialog box.

8. Enter the following data:

| Field | Data |
|---|---|

| | |
|---|---|
| VPK short text | Quotation 20### simulation |

9. Choose ✔.

   The *Change Quotation: Overview* screen appears.

10. Enter the following data for the submission deadline for the quotation on the *Item overview* tab page:

| Field | Data |
|---|---|
| Valid to | Today's date + 6 months |
| Purch. order no. | A-20### |

11. Choose 💾.
12. To confirm possible warning messages, choose ✔.
13. Note the number of the quotation.

## Result

You have created a new quotation on the basis of the planning data for the simulation. You can send the new quotation to your customer.

# Order Entry Processing

## Purpose

Order entry processing begins when the customer makes a binding confirmation (letter of indent).

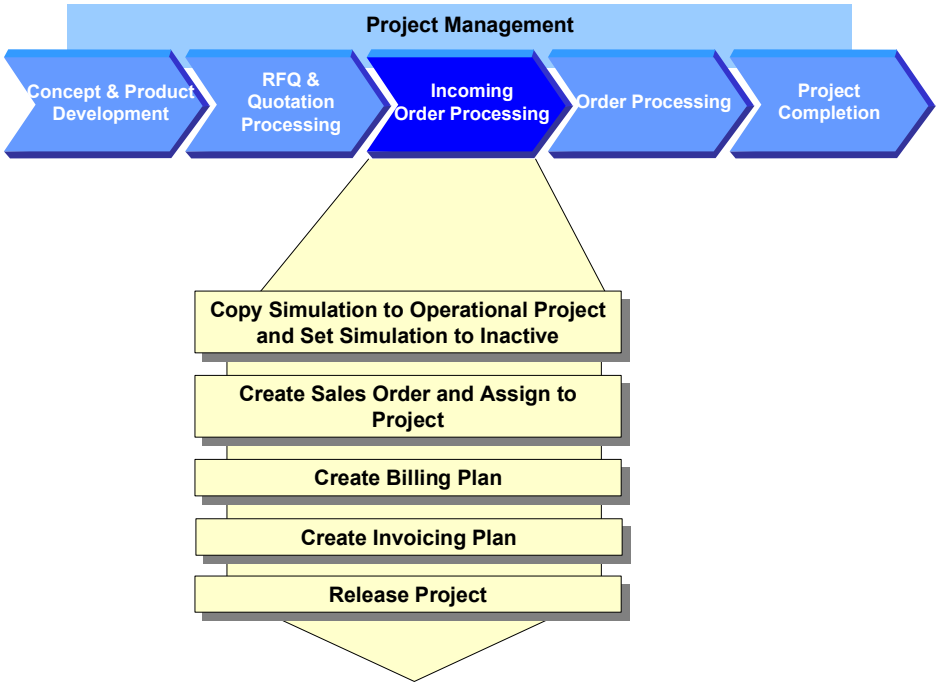
The quotation leads to the generation of an order. The project-specific data determined during the processing of the RFQ and the quotation are checked, edited, and detailed with respect to the incoming order. At the same time, the incoming order triggers a series of activities within the enterprise that differ from the fictitious case of quotation creation with respect to liability.

You create a project-based payment planning. It could be that a considerable cash amount is due when the incoming order arrives.

The incoming order phase ends externally with the confirmation of the order to the customer. Internally, the sales department transfers the operational tasks to the relevant departments.

## Process Flow

The following graphic clarifies the process:




1. Copying the Simulation to an Operational Project [Page 210]

   As the customer has placed the order for the quotation on the basis of the simulation, you copy the simulation to the operational project.

2. Setting the Simulation to Inactive [Page 211]

3. Creating a Sales Order and Assigning it to the Project [Page 212]

   You create the order with reference to the quotation so that you can adopt the already maintained data and depict a complete document flow within the system.

You maintain the order items and assign these to your project.

4. Creating the Billing Plan [Page 214]

   During a business inspection, you plan the revenues via the sales order by saving a billing plan. On the basis of the payment milestones that exist in the project, the system lists the dates for which the down payment requests and sales-relevant invoices are to be sent to the customer.

5. Creating the Invoicing Plan [Page 219]

   The expenditure side is especially important to the planning of project-based liquidity and financial resources. For expenditure blocks that have not yet been defined in detail, you create invoicing plans to ensure that you have the first rough planned data for the expenditures.

6. Releasing the Project via the Basic Engineering Confirmation [Page 221]

   You perform the technical inspection of the set of agreements underlying the sales order in the same way as for the business inspection. The basic engineering phase ends with the confirmation of the basic engineering acceptance. You release the entire project to production and procurement for additional processing. When you confirm this activity, the system automatically triggers the down payment for the customer. For more information, see PS Cash Management [Page 256].

# Copying the Simulation to an Operational Project

## Use

The customer has accepted a second offer (on the basis of the simulation). You therefore copy the simulation to the operational project.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Simulation* → *Transfer Project* |
| **Transaction Code** | CJV4 |

2. Enter the following data:

| **Field** | **Data** |
|---|---|
| Project definition | A-20### |
| Version -> Operative data in the screen area *Transfer from -> to...* | Select |
| Source version | SIM20### |

3. Choose .

   A dialog box appears.

4. Choose *Yes*.

5. Choose .

## Result

The system copies the simulation to the existing operational project. In the operational project, the system sets the deletion flag for the activities deleted in the simulation.

# Setting the Simulation to Inactive

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Simulation* node, choose *Administrative data* |
| **Transaction Code** | CJV6 |

2. Enter the following data:

| **Field** | **Data** |
|---|---|
| Vers.key | SIM20### |
| Project definition | A-20### |

3. Choose .
4. If necessary, select *Inactive.*
5. Choose .

# Creating an Order and Assigning it to the Project

## Use

You create the order with reference to the RFQ and assign it to the top element of your work breakdown structure.

Generally, you would enter multiple document items, for example, to correspond with the components of the power plant. In this example, however, you create only two items:

- *Vessel*

  The *Vessel* item is created as a component of the power plant that is to be billed separately.

- *Power plant*

  The *Power plant* item is created to summarize all of the other items contained in the order. We do this for simplification reasons.

This type of splitting the order into items, the type of billing, the prices, and so on, were agreed with the customer during the contract negotiations on the basis of the quotation.

## Prerequisites

In Customizing for *Sales and Distribution* we have maintained the following data:

- Sales document type *ZEC3 (IECPP: Order)*
- Pricing procedure *ZEC3 (IECPP: Order)*

We have stored the following materials in the material master:

- IECPP-1-VE01 (Vessel)
- IECPP-1-PP01 (Power plant)

## Procedure

1. Call up the transaction as follows:

| **Menu Path** | *Logistics* → *Sales and Distribution* → *Sales* → *Order* → *Create* |
|---|---|
| **Transaction Code** | VA01 |

2. Enter the following organizational data:

| **Field** | **Data** |
|---|---|
| Order Type | *ZEC3 (IECPP: Order)* |

3. Choose *Create with reference*.
4. Choose the *Quotation* tab page.
5. Enter the following data:

| **Field** | **Data** |
|---|---|
| Quotation | The document number of the quotation you noted for the simulation version |

You can search for the document number of your quotation using WBS element A-20###.

6. Choose *Copy*.
7. Enter the following data:

| Field | Data |
|---|---|
| PO number | A-20### |

8. In the *Item Overview* section, enter the following data:

| Material | Quantity |
|---|---|
| IECPP-1-PP01 | 1 |
| IECPP-1-VE01 | 1 |

9. Choose .

### Process document items

1. Select both document items, then choose .
2. On the *Account assignment* tab page, enter the following data:

| Field | Data |
|---|---|
| WBS element | A-20### |

3. On the *Conditions* tab page, enter the price (condition type PR00).

| Field | Data |
|---|---|
| Rate (Item 10) | 300.000.000 |

4. To display the next item, choose .
5. On the *Account assignment* tab page, enter the following data:

| Field | Data |
|---|---|
| WBS element | A-20### |

6. Choose the *Conditions* tab page.
7. Enter the price (condition type PR00).

| Field | Data |
|---|---|
| Rate (Item 20) | 30.000.000 |

8. Choose .
9. Make a note of the number.

# Creating the Billing Plan

## Use

You create a billing plan on the basis of milestones that have been defined for specific network activities of your project. The system determines the planned dates using the scheduled milestones.

You use a billing plan to plan for each order item:

- The billing to the customer

  If a milestone has been reached successfully, the customer is billed for a percentage of the total project costs.

  When you confirm the billing milestone that exists in the project, this triggers a down payment request to the customer. Additional payment milestones generate partial or final payments.

- The expected sales revenues, that is, each time revenue is to be posted in Financial Accounting

  The planned revenues are derived automatically from the billing plan and updated to the corresponding WBS elements.

- The time of the expected cash receipt (PS Cash Management [Page 256])

## Prerequisites

You have created a project with billing milestones and a sales order.

The sales order has been assigned to project.

You have indicated the WBS element on which you wish to plan the revenues as a billing element.

In Customizing of the *Project System*, we have defined that the system updates the billing data from a project-assigned sales order to the assigned WBS element.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Order* node, choose *Change* |
| **Transaction Code** | VA02 |

2. Enter the following data:

| Field | Data |
|---|---|
| Order | Your sales order number |

To search for the document number of your order, you can use the PO number A-20###.

3. Choose .

4. Select both document items, then choose .
5. Choose the *Billing plan* tab page, then choose *Create date*.
6. Enter the following data:

| Field | Data |
|---|---|
| WBS element | Select |
| Field for WBS element | A-20### |

7. Choose .

   The *Select Milestones* dialog box appears.
8. Select the following milestones:
   - Down payment
   - Partial invoice for assembly
   - Final acceptance
9. Choose *Copy.*

   The system adopts the milestone dates as billing dates. The system issues a block to all of the billing dates. These blocks are only removed when you make the final confirmation for the milestone.
10. To display the next item, choose .
11. In the dialog box, choose .
12. Choose the *Billing plan* tab page, then choose *Create date*.
13. Enter the following data:

| Field | Data |
|---|---|
| WBS element | Select |
| Field for WBS element | A-20### |

14. Choose .
15. To select all of the milestones, choose .
16. Choose *Copy.*
17. Choose .
18. In the dialog box, choose .
19. Choose .

## Result

You used billing plans to plan the expected revenues of the document items of your sales order. These refer to the existing billing milestones contained in the project.

Your billing plan for document item IECPP-1-VE01 contains the following dates:

**Creating the Billing Plan**

- The first date is the down payment date. This billing date triggers a down payment request of 10% to the customer. This date is unlocked when you confirm the activity *Basic Engineering Acceptance*.
- The additional dates are dates for the partial or final invoicing.

  When you have confirmed the activity *Follow-Up Assembly* the customer is invoiced for 50% of the net value after confirmation of final acceptance of the remainder.

Your billing plan for document item IECPP-1-PP01 contains the following dates:

- The first date is the down payment date. This billing date triggers a down payment request of 10% to the customer. This date is unlocked when you confirm the activity *Basic Engineering Acceptance*.
- The additional dates are dates for the partial or final invoicing.

  When you have confirmed the activity *Foundations* the customer is invoiced for 35% of the document item.

  When you have confirmed the activity *Follow-Up Assembly* the customer is invoiced for 50% of the net value after confirmation of final acceptance of the remainder.

# Displaying Revenues

## Use

The report *Revenues: Planned Contribution Margin* displays the revenues according to the billing plan. The down payment requests do not affect revenues. The first revenues are recorded only when this first partial invoice is made.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Information System* → *Financials* → *Revenues and Earnings* → *Hierarchical* → *Planned Contribution Margin* |
| **Transaction Code** | S_ALR_87013565 |

2. In the dialog box, choose ✔.
3. If required, enter controlling area **2000**, then choose ✔.
4. If required, enter database profile **ZECPP0000001**, then choose ✔.
5. Enter the following data:

| Field | Data |
|---|---|
| Project | A-20### |
| Additional selection criteria | Delete |

6. Choose .
7. Double-click project definition *PRJ A-20###*.

   You see an overview of the planned values, displayed by individual years.

# Creating an Invoicing Plan

## Use

You create an invoicing plan.

In this process, the invoicing plan contains the planned outgoing payments for the externally procured component *Vessel*.

For more information about invoicing plans, see the SAP Library under *Logistics* → *Project System* → *Payments*.

## Prerequisites

In Customizing of the *Project System*, network profile IECPP01 has been assigned to invoicing plan type 30.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Special Maintenance Functions* → *Network* → *Change* |
| **Transaction Code** | CN22 |

2. Enter the following data:

| Field | Data |
|---|---|
| Network | Number of the network *Vessel* |

You can search for the number of the network using the F4 input help. Choose the *Networks by Project Definition* tab page, then enter the number of your project definition A-20### and choose .

3. Choose .

   You now see the component overview of the network.

4. Select the line for the material IECPP-2-VE01 (boiler), then choose *Details* → *Component* → *Invoicing plan*.

   The system uses the material value from the purchasing data as the target value for the invoicing plan.

5. Enter the following data:

| Field | Date 1 | Date 2 | Date 4 |
|---|---|---|---|
| Invoice date | Current date +1 year | Today's date + 18 months | Today's date +2 years |
| Date description | Down payment | Engineering/Design | Operational |
| % | 10 | 50 | |
| CheckRule | 4 | 1 | 3 |

**Creating an Invoicing Plan**

6. Choose .

   The system determines the invoice values.

7. Choose .

8. Choose .

# Releasing a Project Using a Basic Engineering Confirmation

## Use

All WBS elements, networks and activities as of the release milestone *Down payment* in the activity *Basic Engineering Acceptance* have the system status *Open* (*EROF*).

When you confirm the *Basic Engineering Acceptance* activity for the last time, milestone functions are triggered by the assigned milestone.

This leads to:

- the release of all activities in the project
- the partial release of WBS elements
- the creation of a down payment request in accordance with the order in the billing plan for North Energy Ltd / Calgary

To simplify the process, you then release the entire project. After having released the project, you can then start to execute it. You cannot post actual costs and actual revenue to the individual WBS elements and activities until you have released the project.

You can find further information on confirmations in the Project System in the SAP Library under *Logistics* → *Project System* → *Confirmation*.

## Prerequisites

A milestone has been maintained for the *Basic Engineering* network. This milestone has been assigned to the *Acceptance Basic Engineering* activity.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | Choose from the *Project* node in the *Project Builder*. |
| **Transaction Code** | CJ20N |

2. If required, expand the *Last projects processed* node in the area of the screen containing the work list.
3. Open your project by double-clicking on *Power Plant A-20###* in the area of the screen containing the work list.
4. Expand the following nodes in the project:

   Power plant

   *Engineering*

   *Basic Engineering*

   *Basic Engineering*
5. Select the *Acceptance Basic Engineering* activity.

**Releasing a Project Using a Basic Engineering Confirmation**

6. Choose *Edit* → *Activity* → *Confirm*.

   A dialog box for entering confirmations for the network (actual data) appears.

7. Enter the following data:

| Field | Data |
|---|---|
| Final confirmation | Select |

8. Choose .

   A message appears informing you that the project will be released by the next release milestone

9. Choose .

   All the activities in the project receive the released status. The WBS elements receive a status dictating that they have been partially released.

10. Choose .

11. Open your project by double-clicking on *Power Plant A-20###.*

12. To release the WBS elements, select the *Power Plant* project definition in the structure overview.

13. Choose *Edit* → *Status* → *Release*.

    The system status changes from open to released. You have released the project definition and all its subordinate WBS elements.

14. Choose .

# Order Processing

## Purpose

Procurement, production coordination of construction sites, shipping and assembly are carried out so that the power plant is ready for operation as a result.

Engineering and design becomes more detailed during project processing. Changes are to be analyzed with respect to the possible effects on costs, dates and resources and should be documented and agreed on with the sold-to party. Furthermore, BOMs should be adjusted to fit the results in the detail construction and should be checked with regard to the effects on the whole concept. The process described contains, in praxis, repetitions and changes in many different places.

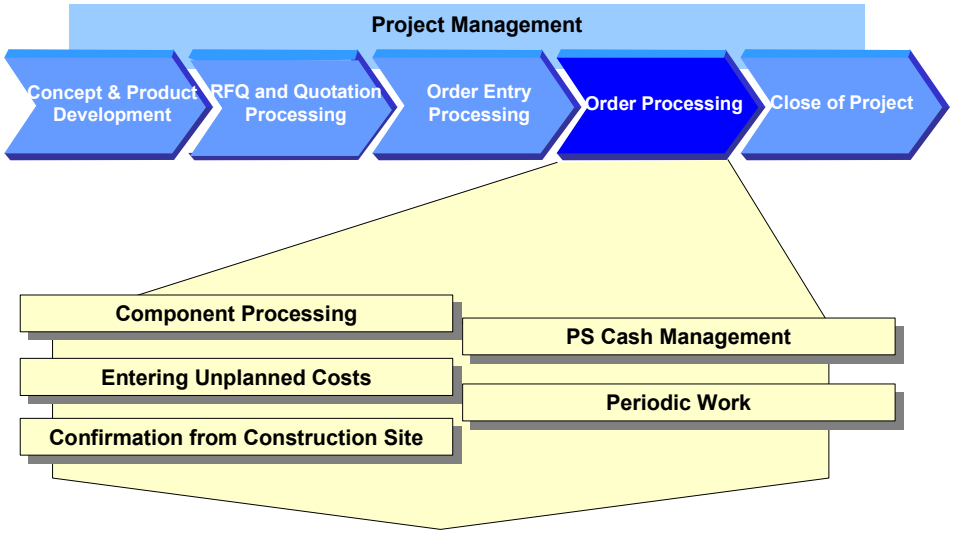
You execute material requirements planning for the project in order to plan procurement measures for the material requirements. Advance procurement and partial deliveries are commonplace since the projects often last a long time.

You can display and valuate the stock situation at any time using the project-related stock/requirements list. Goods receipt and goods issue can be traced with regard to quantity and value and be accounted to the project appropriately using the valuated project stock.

Within the framework of a central planning and control system, confirmations from all areas involved in the project are supported so that there is complete entry of all company-internal and company-external deliveries and services and double entry is avoided.

## Process Flow

The following graphic clarifies the process:



**Order Processing**

1. Component Processing [Page 225]

   The engineering/design department has generated a WBS BOM for your power plant project using CAD systems. In order to plan material costs in detail and trigger the procurement of components, you assign individual BOM components to an activity in your project using the BOM/PS interface. Certain equipment, for example two components for the generator, has long procurement times and must be procured in advance.

   After detailed planning, you assign the BOM to the project and execute material requirements planning.

2. Entering Unplanned Costs [Page 243]

   Unplanned costs arise on the construction site. You post the appropriate invoice.

3. Confirmation from the Construction Site Using CATS [Page 245]

   In the power plant project, work done and activities performed on or for the site are confirmed using time sheets and then transferred to the project system. Since an authorization procedure is in force, the confirmation has to be authorized before the transfer.

4. PS Cash Management [Page 256]

   From a project point of view, it is important for the project manager to be able to plan and oversee the flow of payments, especially for capital-intensive projects or projects of long duration. The payment flow per activity is then evaluated in reporting.

   In praxis, the individual steps are carried out by different employees at different points in time. The individual activities are grouped together in order to clarify the process.

5. Periodic Work [Page 269]

   You carry out periodic work regularly during the processing of the project. The following belongs to project controlling:

   - Determination of the overhead cost surcharges
   - Progress analysis
   - Calculation of incoming orders
   - Project-related/company-wide result determination

# Component Processing

## Purpose

The engineering/design department for your power plant project has used CAD systems to create work breakdown structure BOMs and material master records. In order to be able to plan material costs in detail and trigger procurement of the components, you transfer a BOM to one of the activities in your project.

You can either handle materials in the network or you can assign them dynamically using the BOM PS interface. The latter has the advantage that you can process the project and the BOM separately. If, due to order-specific adjustments, for example, the engineering/design department needs to update the BOM, you can copy these changes to your project by using BOM transfer functionality.

You execute material requirements planning if you want to ensure that the materials you require are available.

## Prerequisites

A BOM for material IECPP-2-GE01 exists in the system.

## Process Flow

1. Checking a BOM [Page 227]

   You check the BOM for the generator component for completeness.

2. Maintaining the Reference Point for the Network Activity [Page 228]

   You have to maintain the reference point in the network activity in order to create a logical connection between the BOM item and the appropriate network activity (advance procurement for generator).

3. Checking the Stock/Requirements List [Page 230]

   The stock/requirements list displays the currently valid requirements and stock situation for a specific material.

   You can often make use of this function to check stock when you process components.

4. Executing a BOM Transfer [Page 231]

   After a successful design phase, you now want to transfer individual BOM components for the generator to the appropriate network for further processing in order to trigger the procurement process on time.

5. Executing Material Requirements Planning [Page 233]

   You execute materials requirements planning for the whole project. The system generates planned orders for materials that are to be produced in-house and purchase requisitions for the purchasing department for components that are to be procured externally. At this moment in time, the materials that first have to be procured are of interest.

6. Creating a Purchase Order [Page 235]

The ordering transaction is triggered for materials that have to be procured externally. You can create purchase orders from the purchase requisitions in the stock/requirements list.

7. Posting the Goods Receipt for the Purchase Order [Page 237]

   You enter the goods receipt from external procurement. The vendor has only delivered part of the purchase order. The quantities provided by external procurement are kept in store and managed with inventory management.

8. Entering an Invoice Receipt [Page 239]

   The invoice is with respect to the purchase order. Freight costs have been incurred. Moreover, the incoming invoice contains sales/purchase tax. You enter this tax data when you enter the invoice.

   The invoice check creates a link between materials management and accounting (financial accounting, asset accounting and cost accounting).

9. Assigning BOM Material in a Project [Page 241]

   You assign the BOM (generator) to the activity (production of generator) in your project. Since you have created a new material in the project, calculate your planned costs again.

# Checking the BOM

## Use

You check the BOM for the generator component and the reference point for two components.

## Prerequisites

The reference point ZECPP01 (IECPP: advance procurement for power plant) is maintained in Customizing for the Project System.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Central Functions* → *Engineering* → *Bill of Material* → *Bill of Material* → *Material BOM* → *Display* |
| **Transaction Code** | CS03 |

2. Enter the following data:

| Field | Data |
|---|---|
| Material | IECPP-2-GE01 |
| Plant | 4000 |
| BOM Usage | 1 |

3. Choose .
4. Select the materials IECPP-2-GE12 and IECPP-2-GE13.
5. Choose .

   The reference point *ZECPP01* has been maintained in the *General data* area on the *Basic data* tab page.

6. To go to the next material, choose .

   The reference point *ZECPP01* has been maintained.

# Maintaining a Reference Point for the Network Activity

## Use

You have to maintain the reference point in the network activity in order to create a logical connection between the BOM item and the appropriate network activity (advance procurement for generator). In contrast to manual assignment of individual components, BOM changes made in the network activity in retrospect can be updated automatically.

## Prerequisites

The reference point ZECPP01 (IECPP: advance procurement for power plant) is maintained in Customizing for the Project System.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Basic Data* → *Project* → *Project Builder* |
| **Transaction Code** | CJ20N |

2. Open your project by double-clicking on *Power Plant A-20###* in the area of the screen containing the work list.
3. Expand the following nodes in the project:

   *Power plant*

   *Components*

   Generator

   *Generator*

   The activities flagged for deletion are underlined in blue.
4. Select the *Prel. procurement generator* activity.

   The detail screen for the activity appears in the area of the screen containing the worklist.
5. Choose the *Assignments* tab page.
6. Enter the following data:

| Field | Data |
|---|---|
| Reference point | ZECPP01 |

7. Choose .

## Result

After you have maintained the reference points, you can transfer the BOM. At this point in time, still no requirements for materials IECPP-2-GE12 and IECPP-2-GE13 have been deducted.

Since you want to check the stock situation every now and then throughout the process, call the stock/requirements list in another session (also referred to as session two in this documentation). Choose to do this.

Checking the Stock/Requirements List [Page 230]

# Checking the Stock/Requirements List

## Use

The stock/requirements list displays the currently valid requirements and stock situation for a specific material. You use this function to check stock at various times during your component processing.

- before and after BOM transfer
- after material requirements planning
- when the purchase order is created
- after goods receipt has been posted

If you have not opened another session, call a second session (also referred to as session two – stock/requirements list) by choosing .

To evaluate the current data, you must update the report after changes have been made to material stock by choosing . If you want to display the stock list for another material, enter the material and then choose .

You can find further information in the SAP Library under *Logistics → PP Production Planning and Control → PP Material Requirements Planning*.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Project System → Material → Planning → Stock/Requirements List* |
| **Transaction Code** | MD04 |

2. Enter the following data:

| Field | Data |
|---|---|
| Material | IECPP-2-GE12<br>IECPP-2-GE13<br>or<br>IECPP-2-GE01 |
| Plant | 4000 |

3. Choose .

# Executing a BOM Transfer

## Use

Preliminary requirements are created by assigning material components to the advance procurement activity in the generator network during BOM transfer. Preliminary requirements serve as coverage for real requirements that are generated at a later stage. This is useful for material components with a long replenishment lead time.

Planned independent requirements are generated (instead of reservations) for materials that are procured using MRP (item category L).

You can find further information in the SAP library under *Logistics* → *Project System* → *Material* → *Bill of Material Transfer*.

## Prerequisites

The following data has been maintained in Customizing for Project System:

- The BOM transfer profile ZEC1 (IECPP: advance procurement power plant)

  The preliminary requirements indicator has been set.
- Reference point ZECPP01 (IECPP: advance procurement power plant)

Settings for advance procurement have been made in the material master record.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Material* → *Planning* → *Bill of Material Transfer* |
| **Transaction Code** | CN33 |

2. Enter the following data:

| **Field** | **Data** |
|---|---|
| Project definition | A-20### |
| Profile | ZEC1 (IECPP: advance procurement power plant) |
| Material | IECPP-2-GE01 |
| Plant | 4000 |
| BOM usage | 1 |
| Additional selection criteria | Delete |

3. Choose .

In the results overview you can see the components of the multi-level BOM that will be assigned to the appropriate activities of the project due to their common reference points. The components are assigned when you save your data.

4. Choose .

## Result

After you have assigned materials IECPP-2-GE12 and IECPP-2-GE13 to the activity and the activity has been released, the system creates planned independent requirements to cover the requirements.

Branch to session two (stock/requirements list), or call up Stock/Requirements List [Page 230] again. Enter the material and choose .

# Executing a Material Requirements Planning Run

## Use

You execute material requirements planning (MRP run) for the whole project in order to plan procurement measures for the material requirements. The system generates planned orders for materials that are to be produced in-house and purchase requisitions for the purchasing department for components that are to be procured externally.

You can find further information in the SAP library under *Logistics* → *Project System* → *Material* → *Advance Procurement*.

Execute an MRP run:

- after the BOM Transfer [Page 231]

  The BOM for the generator has not been assigned to the project yet and will therefore not be exploded yet. At this moment in time, the materials that first have to be procured are of interest.

- after the Assignment of the BOM in the Project [Page 241]

  For materials that are produced in-house, the BOM explosion also determines dependent requirements, in other words the quantity of components that is required to manufacture the finished product or the assembly.

## Prerequisites

The appropriate settings have been maintained for the materials in the MRP views 1 to 4 in the material master record.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | **From the *Material* node, choose *Planning* → *MRP Project*** |
| **Transaction Code** | **MD51** |

2. Enter the following data:

| Field | Data |
|---|---|
| **Project def.** | **A-20###** |
| **Create purch. req.** | **1 (basically purchase requisitions)** |
| **Planning mode** | **1** |
| **Schedule lines** | **3** |
| **Scheduling** | **1** |
| **Display material list** | **Select** |

3. Choose .

   The system asks you to check the entry parameters.

**Executing a Material Requirements Planning Run**

4. Choose .

   The system executes materials requirements planning and displays statistics.

5. Choose *Materials*.

   A screen displaying an overview of the results appears. From here you can branch to the current stock/requirements list for a material, for example.

# Creating a Purchase Order

## Use

The ordering transaction is triggered for materials that have to be procured externally. First of all, you want to order sound protection casing and ten bolts. You create the purchase order from the stock/requirements list.

## Prerequisites

You are in session two Stock/Requirements List [Page 230].

## Procedure

1. Enter the following data:

| Field | Data |
|---|---|
| Material | IECPP-2-GE12 |

2. Choose .
3. Choose to refresh the stock/requirements list after the MRP run.
4. Double-click on the purchase requisition (*PurRqs*) to call a dialog box displaying the details for the MRP element.
5. Make a note of the purchase requisition number.
6. Choose *->Purchase order*.

   The *Create purchase order* screen appears. In the middle screen area an explaining documentation appears.

7. To close the documentation, choose .

   In the left screen area you see the documentation overview. If it's not displayed, choose *Document overview on*. You can adjust the document overview area to your requirements.

   On the right side you see the work area of the activity.

8. Enter the following data:

| Field | Data |
|---|---|
| Vendor | 4000 |

9. To open the item header area, choose *Header*.
10. In the *Org.data* tab page, enter the following data:

| Field | Data |
|---|---|
| Purchasing org. | 4000 |
| Purchasing group | 010 |

11. Choose .

**Creating a Purchase Order**

12. In the document overwiew, select your purchase requisition and choose .

    The system copies the item of the purchase requisition in the item overview area.

    If the item overview area is closed, choose .

13. In the item overview, enter the following data:

| Field | Data |
|---|---|
| Net price | 20,000 |
| Currency | CAD |
| Storage location | 4000 |

14. In the item area, choose the *Invoice* tab page, then enter the following data:

| Field | Data |
|---|---|
| Tax code | I1 |

15. Choose .
16. Make a note of the purchase order number.
17. To refresh the stock/requirements list after the MRP run, choose .

    From the stock/requirements list you can see that the system has created a purchase order for the purchase requisition for material IECPP-2-GE12.

18. Proceed in the same way for material IECPP-2-GE13 and enter `2 000 000` as net price.
19. Choose .
20. To refresh the stock/requirements list after the MRP run, choose .

    From the stock/requirements list you can see that the system has created a purchase order for the purchase requisition for material IECPP-2-GE13.

21. Make a note of the second purchase order number.
22. Switch to the other session.

# Posting the Goods Receipt for the Purchase Order

## Use

The ordered materials have been delivered and you enter a goods receipt for them. The vendor has only delivered part of your order: sound protection casing and 8 bolts.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Follow-On Functions* → *Goods Receipt* |
| **Transaction Code** | MIGO |

2. Enter the following data:

| Field | Data |
|---|---|
| Purchase order | First purchase order number (Search the purchase order for the material IECPP-2-GE12 if necessary) |
| Document date | Today's date |
| Posting date | Today's date |

3. Choose .

   The system copies all the purchase order items as they are into the goods receipt document.

4. Choose the *Qty* tab page, then enter the following data:

| Field | Data |
|---|---|
| Qty in unit of entry | 8 |

You overwrite the default value of ten with the actual quantity delivered of eight.

5. Choose .
6. In the *purchase order* field enter the number of the second purchase order you noted.
7. Choose .
8. In the item overview area select the indicator *OK* for both items.

If the *OK* indicator in the item overview area is not active, either close the item detail area or select *Item OK* at the bottom of the detail area.

9. Choose *Post*.

## Result

The requirement for material IECPP-2-GE12 has not been completely covered. The result is:

- a project stock (P-BEST) of eight bolts
- a purchase order (B-EIN) with an expected receipt/requirement of two bolts and an available quantity of 10 for the requirement date
- planned independent requirements of ten bolts

The requirements have been fully covered for material IECPP-2-GE13. A goods receipt covering the entire quantity ordered for material IECPP-2-GE13 has lead to the system removing this purchase order (BS-EIN) from the list. The result is a project stock (P-BEST) of one.

Branch to session two (stock/requirements list), or call up the Stock/Requirements List [Page 230] again. Enter the material and choose .

# Entering an Invoice Receipt

## Use

You receive an invoice with the following items from your vendor:

| Item | Value |
|---|---|
| Protection against sound | 2 000 000 |
| Bolts | 160 000 |
| Freight costs | 5 000 |
| Tax amount | 324 750 |

Freight costs have been incurred. You enter these costs as unplanned costs.

The invoice includes sales/purchase tax. This is entered as the tax amount. You enter this tax data when you enter the invoice and the system makes the appropriate postings automatically.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Document Entry* → *Enter Invoice* |
| **Transaction Code** | MIRO |

2. If required, enter company code 4000 and choose .
3. On the *Basic data* tab page, enter the following data:

| Field | Data |
|---|---|
| Invoice date | Today's date |
| Amount | 2 489 750 |
| Tax amount | 324 750 |
| Tax amount (field on the right) | I1 (A/P 7%GST, 8% PST distributed) |

4. Next to the *Purchase order/scheduling agreement* field, choose .
5. In the left area of the dialog box, enter your noted PO numbers and choose *Adopt.*
6. Choose .

   The system copies the items and the net amount from the goods receipt.
7. To enter unplanned freight costs, choose the *Detail* tab page.
8. Enter the following data:

| Field | Data |
|---|---|
| Unpl.del. csts | 5000 |

9. Choose .

**Entering an Invoice Receipt**

The traffic lights for the balance are green which indicates that no deficits have been incurred.

If there is a value in the balance field, you must correct the entries you have made. The posting can only take place if the balance equals zero.

10. Choose *Simulate*.

The appropriate posting records are displayed.

At the same time as the invoice is entered, the system finds the accounts that have to be posted to for this invoice. In addition, the system automatically generates postings for sales/purchase tax, discount clearing and price variances.

11. Choose *Post*.

# Assigning BOM Material in a Project

## Use

During quotation processing you have maintained planning material costs for the generator activity. Since the BOM for the generator material has been completely maintained, assign the material to the activity. The planning value is reduced by the value of the material.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Project Builder* |
| **Transaction Code** | CJ20N |

2. Open your project by double-clicking on *Power Plant A-20###* in the area of the screen containing the work list.
3. Expand the following nodes in the tree structure:

   *Power plant*

   *Components*

   *Generator*

   *Generator*

### Checking the Planned Costs

1. Select the activity for the production of the generator .
2. Choose *Edit* → *Costs* → *Plan/Actual* → *Activity/element*.

   Material planning costs have been planned for the material.
3. Choose .

### Assigning Material Components

1. In the *Identifikation and view selection* area, choose .

   The system displays the component overview in the work area.
2. Enter the following data:

| Field | Data |
|---|---|
| Material number | IECPP-2-GE01 |
| Rqmts qty | 1 |
| Item category | L |

3. Choose .

### Recalculating Costs for the Network

1. In the structure tree, select Generator.

2. Choose *Edit* → *Costs* → *Calculate costs*.

### Checking Costs in the Cost Element Report

1. Select the *Production generator* activity.
2. Choose *Edit* → *Costs* → *Plan/Actual* → *Activity/element*.

   The values of the cost elements have changed.

   The planned costs for material planning have been reduced by the price of the material. The planned costs for the stock change (production) result from the material price from the material master record.
3. Choose .
4. Choose .

## Result

By assigning BOM IECPP-2-GE01 to the project, the BOM has received a pegged requirement in the form of an order reservation (AR-RES).

Branch to session two (stock/requirements list), or call up the Stock/Requirements List [Page 230] again. Enter the material and choose .

# Entering Unplanned Costs

## Use

Additional materials are required on the construction site. These materials are procured by the site supervisor on the telephone. After a while, you enter the invoice for the appropriate WBS element for carcass work.

## Prerequisites

The following data has been maintained in Customizing for Financial Accounting:

- G/L account 476900
- Tax code I1

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Financial Accounting* → *Accounts Payable* → *Document Entry* → *Invoice* |
| **Transaction Code** | FB60 |

2. If required, enter company code 4000 and choose ✔.
3. If the tree structure is not displayed, choose *Tree on*.
4. Open the structure in the tree area and choose *Screen variants for items* → *With project*.
5. On the *Basic data* tab page, enter the following data:

| Field | Data |
|---|---|
| Vendor | 4000 |
| Invoice date | Today's date |
| Amount | 10,800 |
| Tax amount (field on the right) | I1 |
| Calculate tax | Select |

6. Make the following entries in the table:

| Field | Data |
|---|---|
| G/L account | 476900 |
| Amount doc. curr. | 10,800 |
| Tax code | I1 |
| WBS element | A-20###-04-03 (carcass work) |

7. Choose *Simulate*.

The appropriate posting records are displayed. At the same time as the invoice is entered, the system finds the accounts that have to be posted to for this invoice. In addition, the system automatically generates a posting for the sales/purchase tax (account 175000).

8. Choose .
9. Choose .
10. In the dialog box, choose *Yes.*

# Confirmation from the Construction Site Using CATS

## Purpose

Determining how many work hours are required and from which cost center is a task for the personnel planning department for the construction site. Exact confirmations from the site for the required working time are of great importance if you wish to plan and execute the project realistically. The CATS time sheet (Cross Application Time Sheet) allows you to enter working time and is a self-service application for internal employees and external agencies.

The work done is then transferred to the Project System. Since an authorization procedure is in force, the confirmation has to be authorized before the transfer.

You can find further information in the SAP Library under *Logistics* → *Project System* → *Confirmation* and under *Cross-Application Components* → *CA Time Sheet*.

## Process Flow

1. Creating a Pool of Confirmations [Page 246]

   Create a poll of confirmations for the WBS element for the site facilities.

2. Entering a Confirmation Using the Time Sheet [Page 248]

   Employees record their working hours on the time sheet. Two employees release this data for authorization.

3. Displaying Confirmed Data [Page 250]

   After a while, you, as supervisor, require an overview of the status of the work that has already been completed. A traffic light function informs you of the processing status.

4. Approving and Authorizing Confirmed Data [Page 251]

   Since an authorization procedure is in force, the confirmation has to be authorized before the transfer. As supervisor, you approve the confirmations made by one of your employees. You do not approve the work done by another employee.

5. Displaying a Reason for Rejection [Page 253]

6. Transferring Data to the Project System [Page 255]

   You transfer data that is required in the Project System to the Project System.

# Generating Pools of Confirmations

## Prerequisites

The PS info profile ZECPP00000001 (IECPP: project objects without components) determines which fields are displayed in the BOM overview, for example, the project object, actual dates, actual costs or work.

You can only confirm activities and activity elements if these activities and elements have been assigned the *Released* status.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Information System* → *Structures* → *Structure Overview* |
| **Transaction Code** | CN41 |

2. If required, enter PS info profile **ZECPP0000001**, then choose .
3. Enter the following data:

| Field | Data |
|---|---|
| WBS element | A-20###-04-01 |
| Additional selection criteria | Delete |

4. Choose .

   The structure overview appears.

5. Select your project and choose .

### Setting up the Application Toolbar

1. To include the function in the application toolbar, choose *Choose functions*.

   The *Choose functions* dialog box appears.

2. In the window area on the left open the *Verify* node and draw the *Create confirmations pool* node into the window area on the right by keeping the left-hand mouse button pressed.
3. Choose *Copy*.

### Generating Pools of Confirmations

1. Select all the activities under network *Site facilities*.

   You can select more than one activity at a time by keeping the *Control* key pressed.

2. Choose *Verify* → *Create confirmation pool*.
3. In the dialog box enter the following data:

| Field | Data |
|---|---|
| Confirmation pool | A-20###-04-01 |
| Description | Site facilities confirmation pool |

4. Choose .
5. Make a note of the earliest start date for the activity for setting up the site infrastructure.
6. Choose .

## Result

You have created a confirmation pool. You can use this confirmation pool at a later date to display the activities assigned to you automatically.

# Entering a Confirmation Using the Time Sheet

## Use

Employees confirm the time that they have spent working on the construction of the site and its facilities. These confirmations are made by three of the employees in your company. These employees enter the working times on the time sheet on a daily basis.

After a plausibility control, two employees release their data for approval. Since the third employee still has some questions to be answered, this employee does not release his confirmations yet.

## Prerequisites

Employee numbers 1100, 1110 and 1120 have been maintained in the personnel master data.

The CATS profile *IECPP001 (IECPP: confirmation of network (release and check))* has been maintained in Customizing for Cross-Application Components.

You have the authorization for entry profile IECPP001 in order to be able to confirm using the time sheet. This authorization can also be maintained in Customizing for Cross-Application Components.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Progress* → *Confirmation* →*Time Sheet* →*Time Data* → *Enter* |
| **Transaction Code** | CAT2 |

2. Enter the following data:

| Field | Data |
|---|---|
| Data entry profile | IECPP001 (IECPP: network confirmation (release and check)) |
| Key date | Date of first activity in the pool of confirmations |
| Personnel number | 1100 |

3. Choose .

   You can use the entry profile to determine that processing can take place using the pool of confirmations.

4. Enter **`A-20###-04-01`** as confirmation pool.

5. Choose and confirm any information dialog boxes that may appear.

   The *Time Sheet: Entry Sheet* screen appears. The system displays the activities for which the employees can make confirmations in the upper part of the screen.

Settings made in entry profile IECPP001 determine that the system displays the confirmation pool for the next two weeks after the entry date. Choose to check or change these settings. A dialog box appears for editing the settings appears.

6. Select activity 30 *Create site warehouse*.
7. Choose to copy the data to the confirmation list.
8. Enter 8 working hours a day for all the days in the first week.
9. Choose *Release view*.

   The *Time Sheet: Release View* screen appears. All the values displayed in blue have not been released yet.

10. Select the activity you want to release and choose .

    The system confirms the release in the status bar.

11. Choose .
12. Repeat steps 2 to 10 for the employee with personnel number 1110.
13. Repeat steps 2 to 9 and step 11 for the employee with personnel number 1120.

Do not release the confirmation for this employee.

# Displaying Confirmed Data

## Use

You want to display the data that has been entered using a time sheet for each person. To display this, you choose the relevant employees from the time sheet data.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Project System → Progress → Confirmation →Time Sheet →Information System Time Sheet Data By Personnel Number* |
| **Transaction Code** | CADO |

2. Enter the following data:

| Field | Data |
|---|---|
| Reporting period: all | Select |

3. To choose more than one employee, choose *Multiple selection* next to the *Personnel no.* field.

   The *Mutiple Selection for Personnel No.* dialog box appears.

4. Make the following entries on the tab page for single values .

| Field | Data |
|---|---|
| | 1100 |
| | 1110 |
| | 1120 |

5. Choose .
6. Choose .

   A screen displaying the time sheet data appears.

## Result

The system displays an overview of the confirmations that have been entered for the appropriate employees. Furthermore, you receive information on the processing status:

- The confirmations for employees 1100 and 1110 have been released for authorization.
- The confirmation for employee 1120 is being processed.

This information is clarified by the use of the traffic light function.

# Approving Confirmed Data

## Use

As supervisor it is your job to check the confirmations made by your employees. You want to authorize the confirmation for the employee with personnel number 1100 and reject the confirmation for employee 1110 on the grounds of incorrect account assignment.

## Prerequisites

The reason for rejection IECP (IECPP: incorrect account assignment) has been maintained in Customizing for the time sheet.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Progress* → *Confirmation* →*Time Sheet* → *Approval* → *Selection Using Time Sheet Data* |
| **Transaction Code** | CAPP |

2. Enter the following data:

| Field | Data |
|---|---|
| Reporting period: all | Select |

3. To choose more than one employee, choose *Multiple selection* next to the *Personnel no.* field.

   The *Mutiple Selection for Personnel No.* dialog box appears.

4. Make the following entries on the tab page for single values .

| Field | Data |
|---|---|
| | 1100 |
| | 1110 |
| | 1120 |

5. Choose .
6. Choose .
7. Select all the work performed by the employee with personnel number 1100.

   You can select more than one entry at a time by keeping the *Control* key pressed.
8. Choose to approve this work.

   The traffic light changes to green.
9. Select all the work performed by the employee with personnel number 1110.

**Approving Confirmed Data**

10. Choose to reject the work you have selected.

    A dialog box appears.

11. By double-clicking on the entry IECP, choose the reason for rejection as incorrect account assignment.

    The traffic light changes to red.

12. Choose .

# Displaying a Reason for Rejection

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Progress* → *Confirmation* →*Time Sheet* →*Time Data Display* |
| **Transaction Code** | CAT3 |

2. Enter the following data on the initial screen:

| **Field** | **Data** |
|---|---|
| Data entry profile | IECPP001 (IECPP: network confirmation (release and check)) |
| Key date | Date of first activity in the pool of confirmations |
| Personnel number | 1110 |

3. Choose .

   The *Time Sheet: Entry Sheet* screen appears.

4. Call an information dialog box by double-clicking on one of the entered times.

   You receive information on the reason for rejection.

5. Choose .

# Transferring Data to the Project System

## Use

You use program *CATS: Transfer to Project System* (*RCATSTPS*) to transfer data to the Project System.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Progress* → *Confirmation* →*Time Sheet* → *Transfer* → *Project System* →*Transfer* |
| **Transaction Code** | CAT5 |

2. Enter the following data:

| Field | Data |
|---|---|
| Test run | Deselect |

3. To choose more than one employee, choose *Multiple selection* next to the *Personnel no.* field.

   The *Mutiple Selection for Personnel No.* dialog box appears.

4. Make the following entries on the tab page for single values .

| Field | Data |
|---|---|
| | 1100 |
| | 1110 |
| | 1120 |

5. Choose .
6. Choose .

   The *Time Sheet: Transfer to Project System* screen appears.

## Result

Since only the confirmations for employee 1100 have been authorized, only these will be transferred.

After you have transferred the confirmation, the system performs the following activities:

- posts your confirmation on the posting date entered
- copies actual dates to the network or to the WBS elements
- calculates actual costs on the posting date and updates them for the activity

# Cash Management Project

## Purpose

When a project is being processed, expenditures and costs that affect revenues are incurred on the project. It is of particular importance for the project manager to plan and monitor the payment flow from a project point of view for long term projects, which require intensive capital. You use Project Cash Management for this project-related view of the payment flow.

For more information, see the SAP Library standard documentation, under *Logistics* → *Project System* → *Payments*.

The individual steps are normally processed by different employees in their current activities. To explain the process, the steps in this example are listed one after another, and then are all evaluated in reporting.

The following particularly concentrates on monitoring customer payments. The payment update on the credit-side is made when you post the corresponding business transactions during order processing.

## Prerequisites

You need to activate Project Cash Management for controlling area 4000.

## Process Flow

### Customer Payments

1. You use the billing plan stored in the sales order to plan customer payments. When you update the values to Project Cash Management, the system automatically takes the payment terms into account. The system uses milestone billing to create the billing dates, which are then invoiced to the project earned value accordingly.

   You already created the billing plan during order processing. The system created dates for the sales order using milestone billing:

   - Down payment date for 10% of the total amount
   - Partial invoice date for 35% and 50% of the total amount
   - Final invoice date

   See Creating Billing Plan [Page 214]

2. The down payment date is unlocked using the corresponding milestone, and a down payment request.

   You confirmed the *Acceptance Basic Engineering* activity during order processing. A billing milestone is assigned to the activity for a down payment. When you make the confirmation, the system automatically unlocks the billing date, so you can create a down payment request [Page 258].

3. You post the down payment after the payment has been received.

   Posting Incoming Down Payments [Page 262]

4. During order processing, you confirm more activities. When you confirm the *Fundaments* activity, you automatically unlock the first partial invoice date.

   Confirming an Activity [Page 264]

5. You create the billing document, in which the down payment already made is automatically cleared.

   Creating Milestone Billing [Page 265]

6. The customer pays the open receivable and you post the incoming payment.

   Posting Incoming Payments [Page 266]

7. To ensure that the payments made are also correctly displayed in Project Cash Management, you transfer the payments when you execute your periodic tasks.

   Transferring Payment [Page 268]

8. You create the second partial invoice in the same way as the first, and then you create the final invoice when the power plant is accepted.

   These steps are not relevant for the example process. You can process it in the same way as the partial invoice. To unlock the billing date for the second partial invoice, confirm the *Follow-up Assembly* activity. To do so for the final invoice, confirm the *Final Acceptance* business transaction.

# Creating Down Payment Requests

## Use

The down payments are part of the agreement with the customer. You stored a down payment date in the billing plan for the sales order. The down payment amount is 10% of the total value of the item.

The down payment date is linked to a milestone in the project. When you create the billing plan, all the dates are initially locked. When you confirmed the *Basic Engineering Acceptance* activity, the corresponding milestone was triggered, and the down payment date was unlocked. During the billing document run, the system selects this date and creates a down payment request. The system automatically updates the down payment request to FI and on the project.

## Prerequisites

The down payment date must be unlocked in the sales order.

The billing element (the WBS element to which the revenues are posted) must be released. Otherwise, the system creates the down payment request without a corresponding accounting document, and does not update the payment data on the project.

## Procedure

5. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales and Distribution* → *Billing* → *Billing Document* → *Create* |
| **Transaction Code** | VF01 |

6. Enter the following data:

| Field | Data |
|---|---|
| Document | Your sales order number |

7. Choose .

   The system selects the down payment requests for the *Boiler* and *Power plant* sales order items.

8. Choose .

## Result

The down payment requests have been created, and the payment data is updated on the project. To evaluate the data change the session (from now on: Session 2 (*Customer payment report*)) and call up the payment report.

Calling Up The Customer Payment Report [Page 260]

The system displays the down payment request in the *Customer DP Reqs* row.

# Calling Up The Customer Payment Report

## Use

As you regularly monitor the payment data on the project during the process, call up the payment report in another session (from now on: Session 2 *payment report*). Therefore choose .To evaluate the current data, you need to exit the report and run it again.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Information System* → *Financials* → *Execute Report* → *Hierarchy Report* |
| **Transaction Code** | CJE0 |

2. Enter controlling area *2000*, then choose .
3. In the structure overview, choose 001 *Project Report* → *ZECPP01B IECPP: Cash in (Reference 31 FIMB).*
4. Choose .
5. If required, enter database profile **`ZECPP0000001`**, then choose .
6. Enter the following data:

| Field | Data |
|---|---|
| Project | A-20### |
| Additional selection criteria | Delete |
| Plan version | 0 |

7. Choose .

   The payment data overview for the project appears. In the *Cust. fin. budget* row, the system displays the revenue data from the billing plan for the sales order.

8. To obtain a period-specific display, in the Navigation area on the left side of the screen, double-click on *Period/Year.*
9. To continue processing, change session.

# Posting Incoming Down Payments

## Use

The customer has paid the down payment request, and you post the incoming payment. You use the down payment request as a reference. The down payment request is cleared.

## Procedure

6. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Financial Accounting* → *Accounts Receivable* → *Document Entry* → *Down Payment* → *Down Payment* |
| **Transaction Code** | F-29 |

7. Enter the following data:

| Field | Data |
|---|---|
| Document date | Today‘s date |
| Document type | DZ |
| Company code | 4000 |
| Posting date | Today‘s date |
| Currency | CAD |
| Customer Account | 4000 |
| Spec. G/L indicator | A |
| Bank Account | 113100 |
| Amount | 37,950,000 |

8. Choose *Requests*.

   The system selects the down payment requests for the two sales order items.

9. Select your down payment requests, and choose *Create down payments.*

   The document overview appears, displaying the down payment amount and the tax portion.

10. Choose and if required should any warning messages appear.

## Result

The system updates the payment data from the down payment to FI and Project Cash Management, with reference to the down payment request.

To evaluate the data, change to session 2 (*Customer payment report*) and call up the report again.

The system displays the down payment in the *Customer down payment* row. The down payment request is reduced to zero with the down payment. The net amounts are displayed on the project.

# Confirming an Activity

## Use

The *Begin shell* billing milestone is assigned to the *Fundaments* activity. When you confirm the activity, the billing date in the sales order is automatically unlocked.

## Prerequisites

You have already released the activity.

## Procedure

8. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Project Builder* |
| **Transaction Code** | CJ20N |

9. Open your project by double-clicking on the *A-20###* project in the work list.
10. Expand the following nodes in the project:

    *Power plant*

    *Construction Site*

    *Shell*

    *Shell*

11. Select the *Foundations* activity.
12. Choose *Edit* → *Activity* → *Confirm*

    The confirmation data for the activity appears. Accept the defaulted plan data for the confirmation.

13. Select *FinalConf.*
14. Choose .

    The Project Builder screen appears. The system sets the extra status *RMAN CONF.*

15. Choose and if required should any messages appear.

# Creating Partial Invoices

## Use

By confirming the *Fundaments* activity, you unlock the *Partial invoice* date using milestone billing. During billing, the down payments already made are automatically cleared with the billing document. The customer is billed for 35% of the total value.

## Procedure

12. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales and Distribution* → *Billing* → *Billing Document* → *Create* |
| **Transaction Code** | VF01 |

13. Enter the following data:

| Field | Data |
|---|---|
| Document | Your sales order number |

14. Choose .

    In the overview for the billing items, the screen title shows that an invoice is being created. The invoice contains two items, one for the partial invoice (item 10), and one for clearing the down payment (item 11). In our process, the down payment is completely cleared with the first partial invoice.

    The system does not calculate the amount to be paid. The customer receives only information on the amount, which they can deduct from the payment.

15. Choose .

## Result

The system posts the total amount of the billing document in FI as a receivable, and updates it in Project Cash Management. The amount paid is thus cleared out of the billing document with the receivable.

Unlike the down payment, the data from the billing document is updated in the form of actual revenues on the project.

To evaluate the data, switch to session 2 (*Customer payment report*) and call up the payment report [Page 260] again.

Clearing the down payment reduces the down payment amount to zero. As the incoming payment has already been posted for the down payment, the cleared down payment amount is displayed in the *Customer payments* row. The remaining amount from the billing request is displayed in the *Cust. payt obl. Inv.* row.

# Posting Incoming Payments

## Use

Once the customer has paid the billing document, you post the incoming payment.

## Prerequisites

Under *Settings* → *Processing Options,* the *Selected Items Initially Active* indicator on the *Open Items* tab page.

## Procedure

7. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Financial Accounting* → *Accounts Receivable* → *Document entry* → *Incoming payment* |
| **Transaction Code** | F-28 |

8. Enter the following data:

| Field | Data |
|---|---|
| Document date | Today‘s date |
| Company code | 4000 |
| Currency / rate | CAD |
| Bank data: Account | 113100 |
| Amount | 8625000 |
| Open item selection: Account | 4000 |

9. Choose *Process open items.*

   The *Incoming Payments (Fast Entry): Process Open Items* screen appears.

10. Select both items (invoice amount and down payment to be added) and choose *Items*.

    The amount of the activated items is assigned to the paid amount. The entered amount is cleared.

11. Choose .

## Result

The open items are cleared by the incoming payment in FI.

In Project Cash Management, the cleared payments are correctly displayed once you have transferred payment.

# Displaying the Document Flow for the Sales Order

## Use

In the sales order, you can see the document flow and thus keep an overview of the posted documents at all times.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| Menu Path | *Logistics* → *Sales and Distribution* → *Sales* → *Order* → *Display* |
| Transaction Code | VA03 |

2. Enter the following data:

| Field | Data |
|---|---|
| Order | Sales order number (You can search for the number using WBS element A-20##) |

3. Choose .

   The system displays the document flow for the sales order.

4. Note down the accounting document for the invoice.

   You need the document number for the payment transfer.

5. Select the accounting document for the invoice and choose *Display document*.

6. Double-click on the first row (account 4000) to call up the financial accounting document.

7. Note down the date in the *Clearing* field.

   You need the clearing date for the payment transfer and for the results analysis.

# Transferring Payment

## Use

You need to transfer payment to enable the cleared invoice to be displayed in Project Cash Management under the payment value type. In practice, you transfer payment as part of your periodic tasks.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Financials* → *Period-End Closing* → *Single Functions* → *Payment Transfer* |
| **Transaction Code** | CJFN |

2. Enter the following data:

| Field | Data |
|---|---|
| Company code | 4000 |
| Fiscal year | Fiscal year of the clearing date from the FI document |
| FI document number (invoice) from - To | Noted accounting document for the invoice |
| Test run | Deselect |

3. Choose .
4. Choose .

## Result

The down payment request has been created, and the data is updated on the project. To evaluate the data, switch to session 2 (*Customer payment report*) and call up the payment report [Page 260] again.

The system displays the cleared invoice in the *Payments* row. In the *Cust. payt obl. inv*. row, the amount is reduced accordingly.

# Periodic Processing

## Purpose

During project execution, there are often variances between the project planning data and the actual project development. Unforeseen events can lead to cost variances and date shifts. It is therefore vital that you always have up-to-date information regarding the status of your project and project progress.

Periodic processing, such as overhead application, interest calculation, results analysis, incoming orders, and settlement are executed on the basis of fiscal year periods. This is generally at the start of a given period for the preceding period.

## Process Flow

You will carry out the following activities several times during the lifetime of a project.

### Periodic Allocations During the Planning Phase

1. Generating the Settlement Rule

   A prerequisite for results analysis is the correct maintenance of the PA transfer structure for the project. The system uses the automatic generation of the Settlement Rule for WBS Elements [Page 271] in accordance with the strategy to assign the settlement rule and PA transfer structure to the WBS elements.

2. Planned results analysis

   You can then determine the project-specific results (Executing Results Analysis in the Plan Version [Page 273]). You use results analysis to determine, for example, the work in process or the cost of sales for a given period. To view cross-enterprise planning data, you need to Transfer the Results Planning Data to Profitability Analysis [Page 277].

   You can find further information in the SAP Library, under *Accounting* → *Controlling* → *Profitability Analysis.*

### Periodic Processing in Project Controlling

1. Calculating overhead

   In the first step, you enter a Collective Confirmation for the Detailed Engineering [Page 279]. You then post the Overhead [Page 282] in the actual version. The system determines the overhead portions of the actual costs incurred for the project and updates them appropriately to the project.

   The system determines the planned overhead costs automatically during the costing. For the actual costs, you need to calculate and update the actual overhead rates explicitly.

   You can find further information in the SAP Library, under *Accounting* → *CO Controlling* → *Overhead Cost Controlling*

2. Progress Analysis

The system uses Progress Analysis [Page 283] to determine the cost and activity variances for the project, based on the planning data and the percentage of completion (POC). These values enable you to forecast the expected cost and activity developments.

You use the Progress Report [Page 285] for internal cost controlling and as an activity confirmation for the sold-to-party.

For more information, see the SAP Library, under *Logistics* → *Project System* → *Project Earned Value*.

3. Results Analysis

   To get an overview of the results of your project, you Execute Results Analysis [Page 288]. Results analysis is a prerequisite for the correct determination of the project incoming orders.

4. Project incoming orders

   At the end of the period, you Determine the Project Incoming Orders [Page 289].

   The system determines key figures for the incoming orders and open orders based on the sales orders assigned to the project. You can now evaluate your project data in the Project Information System (Displaying Project-Specific Results [Page 275]). It is now possible for you to make statements at an early stage regarding the expected results or results development of your projects.

   You can find further information in the SAP Library under *Logistics* → *Project System* → *Revenues and Earnings* → *Project-Related Incoming Orders.*

# Entering the Settlement Rule for the WBS Element

## Use

In this project step, you generate the relevant settlement profiles and settlement rules on the WBS elements.

The system uses the automatic generation of settlement rules (settlement rule and parameters for the settlement rule) according to the strategy defined in Customizing.

For more information, see the SAP Library, under *Logistics* → *Project System* → *Costs*.

## Prerequisites

In Customizing of the *Project System* you have defined settlement profile ZEC001 and strategy Z4 for the automatic generation of the settlement rule on the WBS element.

In project profile IECPP01 we have stored strategy Z4.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Project System* → *Financials* → *Period-End Closing* → *Single Functions* → *Settlement Rule* → *Individual Processing* |
| **Transaction Code** | CJB2 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project definition | A-20### |
| Period | Final period of the project |
| Fiscal year | Final fiscal year of the project |
| Test run | Deselect |
| Detail lists | Select |

3. Choose .

   You see the basic list of the log.

4. To call up detailed information, choose .

   The lists shows you, for example, the strategy used and the generated settlement profile.

## Result

As defined in strategy Z4, which is stored in project profile IECPP01, the system generates a settlement rule, and, if required, a PA transfer structure, for each WBS element.

In line with the settlement rule, the relevant data is settled to Profitability Analysis CO-PA.

# Determining the Results Analysis Date

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales and Distribution* → *Sales* → *Order* → *Display* |
| **Transaction Code** | VA03 |

2. Enter the following data:

| Field | Data |
|---|---|
| Order | Your order number |

To search for the document number of your order, you can use the PO number A-20###.

3. Choose .
4. Select the document item for the power station IECPP-1-PP01.
5. To display the detailed data, choose .
6. Choose the *Billing plan* tab page.
7. Note the billing date of the second partial invoice.

# Executing Results Analysis in the Plan Version

## Use

You execute a revenue-proportional results analysis in the plan version.

## Prerequisites

In Customizing for *Controlling* we have maintained the following settings for determining and updating the results:

- Results analysis key 130001 on the top WBS element
- Allocation structure 40 (IECPP: Settle. CO-PA power station)
- PA Transfer Structure 30 (sales orders/project)
- Settlement profile ZEC001 (IECPP: Settle. Res. Power Station)
- Plan version results analysis CO-PA 400 (CO-PA IECPP Power station)

In the master data, we have also maintained the settlement cost elements 650000 (all costs) and 666000 (all revenues).

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Financials* → *Planning* → *Allocations* → *Results Analysis* → *Proceed* → *Individual Processing* |
| **Transaction Code** | KKA2P |

2. Enter the following data:

| **Field** | **Data** |
|---|---|
| WBS element | A-20### |
| Period | Period of the noted billing date |
| Fiscal year | Fiscal year of the noted billing date |
| RA version | 0 |

3. Choose .
4. Choose .
5. In the dialog box, choose .

   To save the results analysis for both the controlling area currency and the company code currency, you need to save twice.
6. Choose .

## Result

The system has assigned the cost of sales to the revenues incurred. It has also determined the stocks of work in process or reserves.

# Displaying the Project-Specific Result

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Information System* → *Financials* → *Execute Report* → *Hierarchy Report* |
| **Transaction Code** | CJE0 |

2. Choose 001 Project Report → *ZECPP02 IECPP: Plan Oper. Profit.*
3. Choose .
4. In the dialog box, choose .
5. Enter the following data:

| Field | Data |
|---|---|
| Project | A-20### |
| Additional selection criteria | Delete |
| Object currency | CAD |

6. Choose .

## Result

The report contains the following key figures for this project:

- Cost of sales
- Work in process
- Reserves

# Transferring Sales and Profit Planning Data to CO-PA

## Use

To get an enterprise-wide viewpoint, you settle the values to Profitability Analysis (CO-PA).

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Controlling* → *Profitability Analysis* → *Planning* → *Integrated Planning* → *Transfer Order/Project Planning* → *Transfer Project Plan – Individual Processing* |
| **Transaction Code** | CJ7E |

2. Enter the following data:

| Field | Data |
|---|---|
| WBS element | A-20### |
| Period | Period of the noted billing date |
| Version | 0 |
| Fiscal year | Fiscal year of the noted billing date |
| Test run | Deselect |
| Detail list | Select |

3. Choose .
4. To call up detailed information, choose .

## Result

Your project-related planning results have been transferred to Profitability Analysis (CO-PA).

# Displaying the Cross-Project Results

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Controlling* → *Profitability Analysis* → *Information System* → *Execute Report* |
| **Transaction Code** | KE30 |

2. Enter the following data:

| Field | Data |
|---|---|
| Profitability Reports | IDEA |
| Costing-based | Select |

3. Choose .
4. Choose *001 Projekt Report* → *IDES-400 (IECPP: Plan Analysis).*
5. Choose .
6. Enter the following data:

| Field | Data |
|---|---|
| From Period/Year | Period/Year des Projektbeginns |
| To Period/Year | Period/Year des Projektabschlusses |

7. Choose .

## Result

You now see the following key figures for the entire enterprise:

- Revenue
- Cost of sales
- Contribution margin

# Confirming the Detail Engineering

## Use

You use collective confirmation to confirm all activities for WBS element *Detailed Engineering* at the same time. The confirmed data form the basis of the progress determination. The posting date is the earliest start date of the activity *Detail Engineering: Instrumentation and Control*.

## Procedure

Note the value of the *Earliest start date*.

### Collective Confirmation from the Information System

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Information System* → *Structures* → *Structure Overview* |
| **Transaction Code** | CN41 |

2. If required, enter PS info profile **`ZECPP0000001`**, then choose ✔.
3. Enter the following data:

| Field | Data |
|---|---|
| Project | A-20### |

4. Choose .

### Setting up the Application Toolbar

1. To include the function in the application toolbar, choose *Choose functions*.

   The *Select Functions* dialog box appears.

2. On the left side of the screen, expand *Verify* then click on *Collective confirmation* and hold down the left mouse button to drag it into the right side of the screen.
3. Choose *Copy*.

### Confirming the Activities

1. Expand the nodes

   *Power plant*

   *Power plant(A-20###)*

   *Engineering(A-20###-02)*

   *Detail Engineering (A-20###-02-02)*

2. Note the value of *ESchStrt (Earliest scheduled start)* for the activity *Detail Engineering Power Control Center*.

**Confirming the Detail Engineering**

The start date of the confirmation is the earliest start date of the activity *Detailed Engineering Instrumentation and Control.* The work continues until the end of the month. You therefore enter the posting date and the end date of the confirmation as the final working day in the month containing the earliest start date.

3. Select all of the lower-level activities assigned to the WBS element *Detailed Engineering*.

To select the entire line, click on for the given activity. You can select more than one activity by keeping the Cntrl key pressed.

4. Choose *Verify* → *Collective confirmation.*

5. Enter the following data in the upper area of the table:

| Field | Data |
|---|---|
| PostgDate | Final working day in the month of the earliest start date |
| Un. (Unit) | HR |
| ExecStart (Confirmed start date of the execution) | Earliest start date |
| ExecFinsh (Confirmed finish date of the execution) | Final working day in the month of the earliest start date |

6. Choose .

The system adopts the values from the upper table area for all activities.

7. In the lower table area for the individual activities, enter the following data:

| Line | Act.work (actual work) | Pct (Percentage of completion) | Short Text |
|---|---|---|---|
| 1 | 4320 | 50 | Detail engineering: power control center |
| 2 | 1800 | 75 | Detail engineering: fuel supply |
| 3 | 3720 | 25 | Detail engineering: vessel |
| 4 | 10800 | 50 | Detail engineering: gas turbine |
| 5 | 14760 | 75 | Detail engineering: cooling system |
| 6 | 7560 | 25 | Detail engineering: steam turbine |
| 7 | 4200 | 75 | Detail engineering: Transformer |
| 8 | 168 | 25 | Detail engineering: Buildings |

| | | | |
|---|---|---|---|
| 9 | 2160 | 50 | Detail engineering Generator |

8. Choose .

# Calculating Overhead Rates

## Use

You now apply overhead to the actual costs incurred by the confirmation of the activities for detailed engineering.

You determine the overhead costs in the period in which you confirm the detailed engineering.

## Prerequisites

In Customizing of the *Project System* under Controlling, costing sheet ZECPP01 has been maintained. The parameters for the overhead calculation are summarized in the costing sheet.

This costing sheet is assigned to all activities of detailed engineering. The assignment is made indirectly via project profile ZECPP01.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Financials* → *Period-End Closing* → *Single Functions* → *Applied Overhead* → *Individual Processing, Actual* |
| **Transaction Code** | CJ44 |

2. If required, enter controlling area *2000*, then choose .
3. Enter the following data:

| Field | Data |
|---|---|
| Project definition | A-20### |
| With orders | Select |
| Period | Month of the earliest start date |
| Fiscal year | Year of the earliest start date |
| Test run | Deselect |
| Detailed lists | Select |

4. Choose .

   You now see the log containing the results of the actual overhead calculation.

5. To analyze the individual overhead values, choose .

## Result

The system calculates the overhead costs and updates them by cost element on the project activities under overhead cost elements.

# Executing Progress Analysis

## Use

You use progress analysis to monitor the planned and actual progress of the project using the actual work (activity) performed.

The system valuates the activity using the total planned costs, the percentage of completion (POC) and the posted actual costs. Progress analysis provides you with precise information regarding the progress of the project, as well as the cost and date situation. This enables you to recognize trends and take appropriate control measures.

The results include the following data for the Detail Engineering activities, which form the basis for the progress analysis.

| Activity | Planned POC in % | Total Planned Work in Hours | Actual Work in Hours | POC in % |
|---|---|---|---|---|
| Detail engineering: power control station | 50 | 8640 | 4320 | 50 |
| Detail engineering: fuel supply | 50 | 2400 | 1800 | 75 |
| Detail engineering: vessel | 50 | 14880 | 3720 | 25 |
| Detail engineering: gas turbine | 50 | 14400 | 10800 | 50 |
| Detail engineering: cooling system | 50 | 14760 | 14760 | 75 |
| Detail engineering: steam turbine | 50 | 15120 | 7560 | 25 |
| Detail engineering: generator | 50 | 8640 | 2160 | 50 |
| Detail engineering: transformer | 50 | 8400 | 4200 | 75 |
| Detail engineering: buildings | 50 | 16800 | 168 | 25 |

In the Project Builder you can view the values entered for the individual activities. On the *Internal* tab page you see the planned values and on the *Dates* tab page the actual values.

## Prerequisites

The following values have been defined in Customizing for *Project System*:

- Progress version 132
- Statistical key figure ZEC001
- Statistical key figure ZEC002

**Executing Progress Analysis**

- Statistical key figure ZEC003
- Measurement method ZECPP00001 (Start-Finish 50-50)
- Cost element 650500 (PS-Progress analysis Default-KA)
- Cost element group EC_Salary
- Value category ZEC01
- Value category ZEC02
- Value category ZEC03

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Progress* → *Progress Determination* → *Individual Processing* |
| **Transaction Code** | CNE1 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project definition | A-20### |
| With orders | Select |
| Progress version | 132 |
| To period | Month and year of the earliest start date |
| Test run | Deselect |

3. Choose .

# Displaying the Progress Report

## Use

In the information system you evaluate the data together with additional project key figures.

In addition to standard reports, you can also define your own reports. The flexible project reports enable you to define comparison figures in addition to the progress analysis values. Cost and activity variances are important project key figures. You can evaluate these values either at the level of individual project elements or aggregated for the entire project or subproject.

## Prerequisites

Report ZECPP03 has been maintained.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Information System* → *Tools* → *Hierarchy Report* → *Report* → *Execute* |
| **Transaction Code** | CJE0 |

2. Enter the following data:

| Field | Data |
|---|---|
| Report type | Project report |
| Report | ZECPP03 |

3. Choose *001 Projekt Report* → *ZECPP03 IECPP: Earned Value.*
4. Choose .
5. In the dialog box, choose .
6. Enter the following data:

| Field | Data |
|---|---|
| Project | A-20### |
| Period / year | Period and year of the posting date of the confirmation in the form ###.#### (for example, 002.2000) |

7. Choose .

   The *IECPP: Execute Progress: Report* screen appears.
8. Expand the structure.
9. To call up the detailed view, expand the structure.

## Result

The values determined by the system lead to the cost and activity variances for the Detail Engineering activities.

The values can be interpreted as follows:

- A negative cost variance shows that you have incurred more costs than intended. A positive cost variance shows that the work has been cheaper than planned.
- A positive activity variance shows that the project progress on the key date is better than planned. A negative value shows that the project progress is less than planned.

In the Planning accuracy column you see a planning index.

- A planning index of 1 means that your cost planning was perfect.
- An index of 0.5 means that you have incurred twice as many costs as planned.

Additionally, you can see the forecast cost to complete, the forecast total costs and the difference between the planned costs and the forecast total costs.

# Executing Results Analysis

## Use

You execute a revenue-proportional results analysis in the actual version. In this process, you require results analysis to correctly display the project order stock. As the payment triggers the invoice only on the clearing day of the FI document, you execute results analysis for the corresponding period.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Controlling* node, choose *Period-End Closing* → *Single Functions* → *Results Analysis* → *Proceed* → *Individual Processing* |
| **Transaction Code** | KKA2 |

2. Enter the following data:

| Field | Data |
|---|---|
| WBS element | A-20### |
| Period | Period of the clearing date for the invoice |
| Fiscal year | Fiscal year of the clearing date for the invoice |
| RA version | 0 |

3. Choose .
4. Choose .
5. In the dialog box, choose .

   To save the results analysis for both the controlling area currency and the company code currency, you need to save twice.
6. Choose .

## Result

The system has assigned the cost of sales to the revenues incurred. It has also determined the stocks of work in process or reserves.

# Determining the Project Incoming Orders

## Use

The system uses this function to determine key figures for incoming orders and open orders, based on sales orders assigned to projects. The key figures for the incoming orders are the expected revenues, costs, and quantities from sales orders that have been closed or changed during the current period. It is now possible for you to make statements at an early stage regarding the expected results or results development of your customer projects.

You execute the run to determine the incoming orders at the end of the period. You can execute the run more than once within a given period. The system determines the changes for the incoming orders compared to the previous run.

In this demo, you enter the project finish as the period to ensure that you generate meaningful key figures.

You can find further information in the SAP Library under *Logistics* → *Project System* → *Revenues and Earnings* → *Project-Related Incoming Orders.*

## Prerequisites

The top WBS element Power station (A-20###) is indicated as a billing element. The billing element has the status Released.

The system updates the sales order value on the billing element. This is because in Customizing of the Project system we have activated the update of planned revenues from sales documents.

The following values have also been defined in Customizing for the *Project System*:

- Cost element group EC_Salary
- Value category ZEC01
- Value category ZEC02
- Value category ZEC03

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Period-End Closing* node, choose *Single Functions* → *Incoming Orders* → *Individual Processing* |
| **Transaction Code** | CJA2 |

2. Enter the following data:

| **Field** | **Data** |
|---|---|
| Project definition | A-20### |
| Period | Final period of the project |
| Fiscal year | Final fiscal year of the project |
| Additional selection criteria | Delete |

| | |
|---|---|
| Test run | Deselect |
| Detail lists | Select |

3. Choose .

   When the incoming order run is complete, the system displays a log.

   This log consists of

   – A basic list with output parameters and statistics regarding the number of processed objects

   – A detailed list, containing information about the individual objects, such as, cost element, revenues, costs and quantity

## Result

The system determines the values for the incoming orders on the billing element. It also updates the values on the incoming order cost elements for the specified period under value type 19. The system calculates the reduction values for the incoming order from the accrued actual data and updates the value for the relevant category (open orders: reduce through billing).

# Displaying the Incoming Orders and Order Stock

## Use

You evaluate the incoming orders and the order stock in the Project Information System. You can compare the current planned and actual revenues with the sales order value.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Information System* node, choose *Financials* → *Revenues and Earnings* → *Hierarchical* → *Incoming Orders / Balance* |
| **Transaction Code** | S_AL_87013569 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project | A-20### |

3. Choose .
4. In the dialog box, choose .

## Result

The key figures for the incoming orders are the expected revenues, costs, and the results of the sales order for project A-20###, which has been closed or changed in the current period.

# Make-To-Order Production of Elevators

## Purpose

In this IDES process, you carry out an engineering project. You start by entering an order for an elevator, and run through the project phases right up to the project close.

The main functional points are assembly processing, variant configuration, milestone technique, integration of production planning and control, and confirmations and time recording in the Project System.

You can find more information about this process in [Page 293].

Choose basic data and settings [Page 295] to display basic structures and system settings in the IDES system for assembly processing.

## Prerequisites

The descriptions of objects in the project system do not exist in multiple languages. For this reason, you should now execute a one-time Automatic Translation [Page 15] into the language you require.

Choose Inventory Management [Ext.] to procure stock materials.

## Process Flow

You can find the data for this process under [Page 309].

1. Sales and Distribution [Page 308]
2. Engineering [Page 324]
3. Procurement [Page 335]
4. Asssembly [Page 356]

# Additional Process Information

## Assembly Processing with Projects

To be able to supply your customers with more accurate information about when they can expect delivery, you may need to carry out availability and resource checks when entering a sales order.

You want to know whether a product is available when the customer wants it or, if not, when it will be available. As the end product is not in stock, it is a good idea to make the check at component level.

Feedback between SD and production is also important to the supply of reliable information to customers. Schedule or quantity changes in the procurement of components must be sent on to the sales order for the end product, so that any information already supplied can be amended promptly (if necessary).

The system accommodates these requirements in the planning strategies that form part of assembly processing.

When you create a sales order for a material, to which a strategy group for assembly processing has been assigned, this automatically triggers an assembly order in the background, and assembly processing. The strategy group determines the assembly order type. In this example, the assembly order is a network.

Assembly processing includes all the sales order and network functions.

When you create a sales order, the system automatically creates the network as the procurement element. In the network, you then use scheduling and the material availability check to determine the correct delivery date. The direct connection means that any changes you make to dates or quantities in the network are reflected in the sales order. Conversely, changes made in the sales order automatically take effect in the network.

In this process, you use assembly processing with  variant configuration. The end result is a variant product, configured when the sales order is created. The results of this configuration are automatically adopted in the network and affect which activities and BOM components are adopted in the network.

You can use assembly processing with projects if you are working in make-to-order production or you do not yet know exactly how you will carry out a sales order:

- If your customer orders a product so complex to assemble or produce that you regard it as a project You can use networks to plan in the medium and long terms if, for example, assembly will only begin in six months time
- If your customer orders a product that you are producing or assembling for the first time You can then use the network for rough-cut planning and refine it in further planning, and, if required, complement it with production order.
- If your production or assembly includes technical or chronological dependencies
- If you want to use Project System functions when carrying out an order

You need the following basic data in the Project System to use assembly processing with variant configuration:

- Standard network
- Standard WBS

**Additional Process Information**

- Network parameters from sales order

The following prerequisites must be satisfied:

- The end product in the sales order is a configurable material.
- The materials BOM is assigned to the standard network.

  You use the standard network to select the required material components.
- Material (end product) and standard network are assigned using the network parameters from the sales order.

  The standard network acts as the template for the network created automatically.
- You have assigned material, standard network, and BOM are assigned to the same variant class, using your configuration profile.

  This ensures that their characteristics are identical. The configuration process at network and component levels can be executed using the characteristic valuations from the sales order.
- Dependencies are maintained for activities and BOM items in the standard networks.

  The characteristic valuations from the sales order act as parameters for the dependencies. The result of the dependencies is used to make the automatic selection of activities and components.
- Standard WBS elements are assigned to standard networks.

  The standard WBS acts as the template for the WBS created automatically. Network activities and WBS elements are assigned in the same way as the standard structures are.
- Milestones are assigned to the standard networks.

  The milestones determined the dates in the billing plan for the sales order, and the values to be billed.

# Basic Data and Settings

You can find the data for this process under [Page 296].

1. Standard Work Breakdown Structure [Page 297]
2. Standard Network [Page 299]
3. Network Parameters for the Sales Order [Page 302]
4. Configuration Profile [Page 303]
5. Characteristics and Dependencies [Page 305]
6. Displaying Dependencies [Page 306]

# Data Used During This Process

| Field | Data | Usage |
|---|---|---|
| Customer Material | E-1000 | Elevator Model 1000 |
| Standard WBS | E-1000 | Template for WBS |
| Standard Network | E-1000 | Template for network |
| BOM | E-1000 | Elevator |
| Dependency Group | ELEVATOR | Grouping codes for the dependencies used in the process |
| Routing Group | E-1000 | Routing, planned order for cabin and shaft |
| Network type | PS04 | Customer project processing |
| Order type | PS1 | Sales order |
| Project profile | 1300 | Settings for elevator |
| Network Profile | 1300 | Settings for elevator |

# Standard Work Breakdown Structure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Project System → Basic Data → Standard Templates → Standard WBS → Display* |
| **Transaction Code** | CJ93 |

2. Enter the following data:

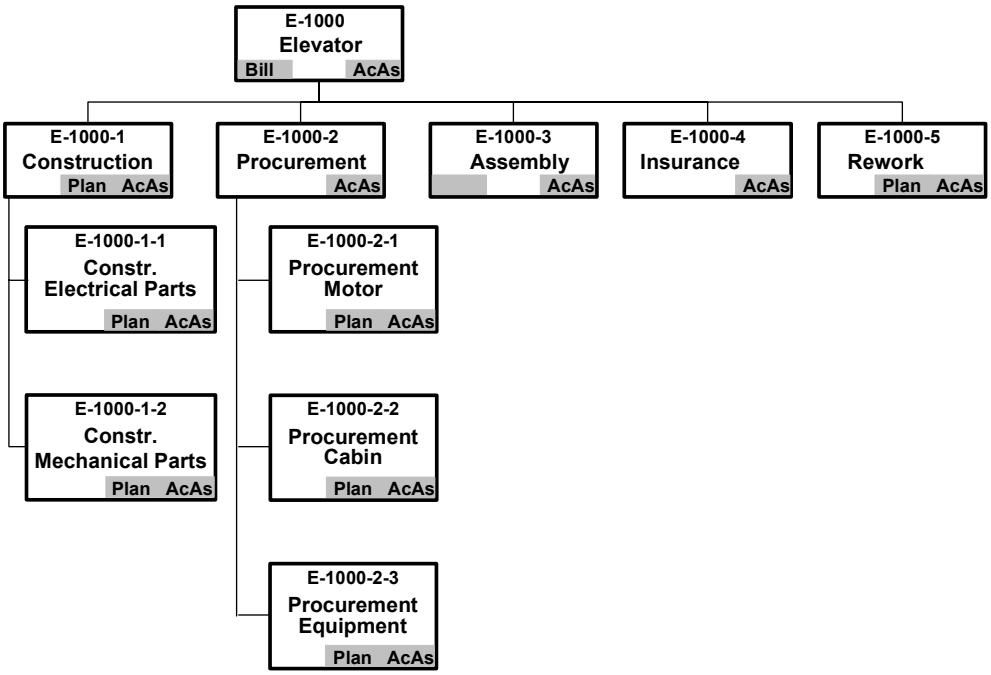
| Field | Data |
|---|---|
| Std Project Def. | E-1000 |

3. Choose .

   You now see all of the WBS elements contained in the standard WBS.

4. Choose .

   The graphic illustrates the work breakdown structure.




   The operative indicators tell you which tasks the individual WBS elements perform during project execution. For example, WBS element E-1000 is the billing element.

5. To return to the structure overview, choose .

6. Choose  until the overview tree appears.

# Standard Network

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Basic Data* → *Standard Templates* → *Standard Network* → *Display* |
| **Transaction Code** | CN03 |

2. Enter the following data:

| Field | Data |
|---|---|
| Standard Network | E-1000 |
| Alternative | 1 |

3. Choose .

   You see the internally processed activities in the activity overview.

4. Choose the *Primary Costs* tab page.

   You see the costs planned for insurance.

5. Choose the *External Processing* tab page.

   You see the *Acceptance* activity (processed externally); it is a service activity.

6. Select the externally-processed activity, then choose .

7. The *Display Standard Network: Detailed Data* dialog box appears.

8. Choose *Service*.

   This takes you to the service specifications, showing the individual services planned for accepting the elevator.

9. To call up the item details, simply double-click on the item.

10. Return to the activity overview.

11. Choose .

    You now see the graphical representation of the network structure. If the graphic is not displayed, click the scroll bar to access the right side of the screen. Drag the green frame in the navigation area to get a better overview of the standard network.

12. Choose .

13. Choose the *Total* tab page.

    You now see the assignment of activities to standard WBS elements.

    Activity 1030 "Design Mechanical Components" is assigned to the standard WBS element E-1000-1-1.

14. Choose the *Internal Processing* tab page.

### Checking Milestones

1. Choose .

2. Choose *Activity* → *Milestone Overview*.

   Milestones have been assigned to the activities in the standard network. The milestones trigger various project execution functions.

   A milestone with the usage key ZREL is assigned to activity 1000 "Layout". In this IDES process, ZREL denotes milestones that are used only to release activities.

3. Select the *Layout* activity, then choose .

   The milestone functions indicator is set.

4. Choose the *Functions* tab page in the dialog box.

   The *Release up to stop* indicator is set. The system status field shows CRTD (created). The milestone will release activity 1000 and those following it, up to an activity with an assigned release milestone, as soon as the network is created,

5. Choose .

6. Choose .

   You see the milestone overview for activity 1010 "Customer Acceptance". A milestone with the usage key PS01 is assigned to the activity.

   Usage keys PS01, PS02, and PS03 indicate the billing milestones in this process. Each key represents one item in the billing plan. The short texts for the usage keys also act as date descriptions in the billing plan.

7. Select the customer acceptance milestone, then choose .

   The following indicators are set:

   – *Release stop ind.*

     Activity 1010 completes the "Release" milestone function up to the release milestone from activity 1000.

   – *Sales document date*

     This indicator determines, in conjunction with date key 01 defined in the screen, how the milestone is used in the billing plan.

     The date scheduled for the milestone is the billing date for the billing plan item. The billing percentage specified here determines the value to be billed.

   – *Milestone Function*

     A milestone function is linked with the activity.

   – *Trend analysis*

     The activity is relevant to milestone trend analysis.

8. Choose the *Functions* tab.

   The indicator for the release of activities directly following is set. The system status field is set to confirmed.

   When activity 1010 (Customer Acceptance) is finally confirmed, the subsequent activities for design and advance procurement are automatically released for processing.

9. Choose .

10. Choose until the overview tree appears.

# Network Parameters from the Sales Order

## Use

The network parameters for the sales order create the link between material and standard network for assembly processing.

In addition, you can enter settings or default values for assembly processing.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Basic Data* → *Standard Templates* → *Network Parameters from Sales Order* → *Display* |
| **Transaction Code** | CN09 |

   You see the allocations between the materials and standard networks.

2. Select the line for material *E-1000* and choose .
   - A network is created for material E-1000. Standard network E-1000 acts as the template for the network created in the sales order.
   - Network profile 1000 is applied when the network is created.
   - The order type (*) is determined from the network profile.
   - The MRP controller is determined from the material master.
   - The default value for the account assignment of the item in the sales order is standard WBS element E-1000.

     A WBS, taking standard project E-1000 as the template, is automatically created in the process. The WBS element whose template is standard WBS element 1000 becomes the billing element.
3. Choose until the overview tree appears.

# Configuration Profile

## Use

The configuration profile is where materials or standard networks are assigned to the variant class Variant Configuration:

Material E-1000 and standard network E-1000 are assigned to the *Elevator* variant class.

The standard material and material BOM are created to the fullest possible extent. The assemblies from the material BOM are components in the standard network.

The selection of the material components and network activities for the chosen elevator variant is controlled using characteristics and dependencies from the assigned variant class.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Central Functions* → *Variant Configuration* → *Configuration Profile* → *Display* |
| **Transaction Code** | CU43 |

2. In the dialog box, select *Material*, then choose .
3. Enter the following data:

| Field | Data |
|---|---|
| Material | E-1000 |

4. Choose to confirm your entry.

   Configuration profile ELEVATOR has been created for material E-1000.

5. Select the first item in the profile overview, then choose *Class Assignments*.

   Variant class ELEVATOR is allocated to material E-1000.

6. Choose twice.

   The initial screen appears.

7. Choose *Change confble obj.*
8. In the dialog box, select *Standard network*, then choose .
9. Enter the following data:

| Field | Data |
|---|---|
| Standard Network | E-1000 |
| Alternative (Field Behind Standard Network) | 1 |

10. Choose .

    Configuration profile ELEVATOR is allocated to standard network E-1000.

11. Select the first item in the profile overview, then choose *Class Assignments*.

**Configuration Profile**

Variant class ELEVATOR is allocated to material E-1000.

12. Choose until the overview tree appears.

# Characteristics for Configurable Material

## Use

Elevator Model 1000 is a variant product. The possible variants are depicted in the configurable material E-1000 using characteristics and valuations for the variant class.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Variant Configuration* node, choose *Environment* → *Reporting* → *Characteristics and Values*. |
| **Transaction Code** | CU80 |

2. Enter the following data:

| Field | Data | Description |
|---|---|---|
| Material | E-1000 | Elevator Model 1000 |
| With values | Select | |

3. Choose .

   You see a list of the characteristics and the possible characteristic valuations for the configurable material.

   The *Cabin Width* screen area shows that there are different widths of elevator.

4. Choose until the overview tree appears.

# Displaying Dependencies

## Use

Dependencies are defined for various assemblies in the BOM for material E-1000. Depending on the characteristic valuation, the assemblies required for the desired elevator variant are selected. In the same way, dependencies are defined for particular activities for standard network E-1000.

## Procedure

### Displaying Dependencies in the Material BOM

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Production* → *Master Data* → *Bills of Material* → *Bill of Material* → *Material BOM* → *Display* |
| **Transaction Code** | CS03 |

2. Enter the following data:

| Field | Data | Description |
|---|---|---|
| Material | E-1000 | |
| Plant | 1300 | Frankfurt |
| Usage | 1 | Production |

3. Choose .

   You can see that the object dependency indicator *(OD)* is set for a number of items.

4. Select the BOM item for component *E-1500*.

5. Choose .

6. Choose *Dependency editor.*

   You now see the dependency that has been maintained for this object.

   The assembly E-1500 is selected only for elevator variants with 50kW motors.

7. Choose until the overview tree appears.

### Displaying Dependencies in the Standard Network

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Basic Data* → *Standard Templates* → *Standard Network* → *Display* |
| **Transaction Code** | CN03 |

2. Enter the following data:

| Field | Data |
|---|---|

| | |
|---|---|
| Standard Network | E-1000 |
| Alternative | 1 |

3. Choose .
4. Select activities 1040 and 1090, then choose *Extras* → *Object dependencies* → *Editor*.

   The system displays the dependency for activity 1040.
5. Choose .
6. To display the dependency for activity 1090, choose *Yes.*
7. Choose *Dependency editor.*

   Dependencies are maintained for activities 1040 and 1090.

   The selection condition ELEV_S_ACTIVITIES_IF_GLASS is assigned to the activities, along with the dependency CABIN_WALLS EQ ‘GLASS’.

   The activities are only to be carried out if the cabin walls are made of glass. If you choose Wood panels for the cabin walls in the sales order, the activities are not adopted in the network.
8. Choose until the overview tree appears.

# Sales & Distribution

## Purpose

You do the following in the sales and distribution phase:

- Enter the order

  When entering the sales order, you configure the elevator per the customer's requirements. You enter values for the characteristics, such as the size of the elevator cabin or the color of the carpet.

  When you save the sales order, the system automatically creates the relevant WBS and network.

- Display the project data

  You see an overview of the project structures the system has created.

- Confirmation

  The first project activities covers the layout of the elevator and the submission of the plans to the customer for approval.

  By confirming the appropriate activities, you are entering the project progress data and releasing subsequent activities for processing.

## Process Flow

You can find the data for this process under [Page 309].

1. Creating a Sales Order [Page 310]
2. Displaying Project Data [Page 312]
3. Planning Revenue [Page 314]
4. Confirmation [Page 315]
5. Design Worklist [Page 317]
6. Releasing the Project [Page 322]
7. Partial Billing [Page 323]

# Data for this Example

| Fields | Data | Description |
|---|---|---|
| Sales document type | PS1 | Order Type for Engineering Project |
| Sales organization | 1000 | Frankfurt, Germany |
| Distribution channel | 10 | Final customer sales |
| Division | 00 | Cross-divisional |
| Sold-to party | 1600 | TALPA GmbH |
| Material | E-1000 | Elevator Model 1000 |
| Plant | 1300 | Frankfurt |
| CATT | ZID10000 | CATT for setting up or topping up stock |

# Creating a Sales Order

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales and Distribution* → *Sales* → *Order* → *Create* |
| **Transaction Code** | VA01 |

2. Enter the following data:

| Field | Data |
|---|---|
| Order type | PS1 |
| Sales organization | 1000 |
| Distribution channel | 10 |
| Division | 00 |

3. Choose .

4. Enter the following data:

| Field | Data |
|---|---|
| Sold-to party | 1600 |
| Purch. order no. | 1234 |
| Req.deliv.date | Date in two months |
| Material | E-1000 |
| Order quantity | 1 |

5. Choose .

6. If required, choose in the information window.

   The *Characteristic Valuation* screen appears.

7. Choose .

   The system displays the net value (sales price) of your order.

8. To configure the elevator being produced, enter the following data on the *Create Order: Overview* screen:

| Field | Data |
|---|---|
| Maximum Number of Passengers | 15 |

9. Choose .

10. Choose .

    Note the system activities that took place automatically, due to the revaluation. The *Drive* characteristic valuation and the *Net Value* (sales price) have been revalued to reflect the higher number of passengers.

11. Choose .

12. If required, specify business area **2000**.
13. Choose .

    A dialog box appears.
14. Choose in the *Milestone Function* information window.

    The system uses the standard network stored for the material to create a network; it then determines a delivery date from the requested delivery date and the data from the network.

    The system releases the "Layout" and "Customer Acceptance" activities. The other activities remain in *Created* status.

    Availability control intervenes. Delivery at the requested delivery date is not possible.

    The system uses network scheduling to determine the earliest date possible.

    No delivery proposal is determined. The customer material E-1000 is not delivery-relevant. The individual elevator components are delivered in line with the project's progress. The delivery document is created in the Project System.
15. Choose *Complete dlv.*
16. Select item 10 on the *Sales* tab page, then choose .

    The system has created two schedule lines for sales item 2:

    - A requested delivery date with confirmed quantity zero (the elevator cannot be delivered as of this date)
    - A calculated delivery date with a confirmed quantity of one (delivery date is the date by which all the network activities are completed)
17. Select the first item in the table, then choose .
18. Choose the *Procurement* tab.

    In the *Assembly* section of the screen, you can display and process the network within sales order processing, using the following pushbuttons:

    - Header
    - Gantt Chart
    - Object list
    - Activities
19. Choose .
20. Choose .
21. Note this sales order number.

# Displaying Project Data

## Use

Use the evaluation options provided by the project information system to view the project generated as a result of your configuration entries:

- Structure Overview
- Project structure graphic
- Gantt Chart

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Information System* → *Structures* → *Structure Overview* |
| **Transaction Code** | CN41 |

2. If required, specify PS info profile `000000000001`, then choose ✔.
3. Enter the following data:

| Field | Data |
|---|---|
| Project | E-#### (#### is the number of the sales order) |
| Additional selection criteria | Delete |

4. Choose .

   The structure overview shows the project objects as they appear in the project hierarchy. You can branch from the structure overview to individual overviews, detail screens, and graphical evaluations.

5. Select E-#### and choose .
6. Choose .

   All the objects in the structure are selected.

7. Choose *Graphic* → *Project Structure*.

   The project structure graphic gives you an overview of how the project is set up, of the dates in the project, and of the different WBS element types and activity types and how they are used.

8. Choose *Settings* → *Legend* → *Left.*

   The legend now shown on the left-hand side of the display area supplies information on the graphical elements and the data shown.

9. Choose *WBS Elements*.

   The *Node Representation: WBS Elements* dialog box appears.

10. Select *Expanded* and choose ✔.

11. Choose *Activities*.
12. Select *Expanded* and choose .

    The extended node representation is the most detailed form of display.

    - If orders or network activities are assigned to a WBS element or if documents or milestones are maintained, this is emphasized in the extended graphical display using different colors for the relevant indicators.
    - The same applies for activity elements, milestones, material components, and documents in activities.

13. Choose .

    The structure overview appears.

14. Choose *Graphic* → *Gantt Chart*.

    The bar chart gives you a graphical overview of the whole project. The overview is similar to the Gantt chart, but has more functions.

    In addition to time planning, you can access, amount other things, detail screens for activities, relationships, and milestones, and insert additional fields to display planned and actual costs in the table area.

15. Select the network header *Elevator Model 1000*, then choose .

    This takes you the *Project Information System: Network Detail Screen* dialog box.

    - The network is assigned to the sales document as an assembly order.
    - It is also assigned to the WBS.
    - The requested delivery dates is checked using the schedule date from network scheduling. If necessary, a later delivery date is determined.

    Make a note of the network number. You will need it later.

16. Choose .
17. Choose until the overview tree appears.

# Planning Revenue

## Usage

Revenue planning covers the revenues you expect to earn as you execute your project. If you enter the appropriate settings in customizing, the billing plan values are automatically recorded in the project as revenue plan values.

You can only plan revenues in WBS elements that are flagged as billing elements. In this project, the top element in the WBS is the billing element.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Project System* → *Financials* → *Planning* → *Revenues in WBS* → *Display* |
| **Transaction Code** | CJ43 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project def. | E-#### (#### is the number of the sales order) |

3. Choose .

   You now see the annual overview for the current calendar year. No revenues have been planned manually. Depending on the view you choose, the following are examples of data you can view in addition to the planned revenues:

   – Planned total

     In our project, this is the total of the planned value maintained manually and the sales order value.

   – Sales order value

     This is the billing plan value for the sales order.

4. Choose until the overview tree appears.

# Confirmation

## Use

Confirmations document the state of processing for activities and activity elements in the network and provide a forecast of how processing will proceed further.

The activities "Layout" and "Customer Acceptance" have already reached the milestone that releases them for processing. You use the Project Builder to confirm activity processing as complete.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Project Builder* |
| **Transaction Code** | CJ20N |

   The Project Builder screen appears.

2. Choose .

   The *Open Project* dialog box appears.

3. Enter project definition **E-####**.

4. Choose .

5. Select project definition E-#### and choose .

   If the system does not display all icons in the *Structure Tree* screen area, you can enlarge the screen area or choose *Expand all* using the right mouse button.

6. Select activity *Layout*.

7. Choose *Edit* → *Activity* → *Confirm*

   A dialog box appears, showing the actual data for activity 1000 *Layout*. The final confirmation indicator is set.

8. Adopt the earliest start and finish dates and the planned duration. Enter them in the *Actual* line in the confirmation part of the screen.

9. Choose .

   The Project Builder screen appears.

10. Select activity *Acceptance from the customer*.

11. Choose Edit → *Activity* → *Confirm*

    The dialog box for activity 1010 *Customer Acceptance* appears.

12. Adopt the earliest start and finish dates and the planned duration. Enter them in the *Actual* line in the confirmation part of the screen.

**Confirmation**

13. Choose .

    The dialog box Milestone Functions appears, showing information on the release of activities directly following this one.

    In the *Customer Acceptance* milestone, the *Release of Directly Following Activities* is maintained in the *Confirmed* status. This status is set when you set the final confirmation indicator for the activity. Doing this triggers the milestone function.

    The design activities directly following this one are automatically released for processing.

14. Choose .

    The Project Builder screen appears.

15. To save the confirmation data for both activities, choose .

16. Choose until the overview tree appears.

# Design Worklist

## Use

This list showing the work to be carried out by an employee, called the worklist, appears and is managed in the integrated inbox in the SAP System. From this inbox, you can processing the individual activities in the worklist, called the work items.

From the information system, you can generate a worklist for the confirmation. A confirmation worklist can be sent to different processors - for example, a user or an organizational unit.

In this process, you use the workflow to:

- Provide information on the release of design activities
- Assign the design activities for processing
- Give the best possible support to the designer as an occasional user

## Prerequisites

You have adapted the application function bar.

Adapt Application Function Bar [Page 354]

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Information System* → *Structures* → *Individual Overviews* → *Activities* |
| **Transaction Code** | S_ALR_87015070 |

2. If required, specify PS info profile `000000000001`, then choose ✔.
3. Enter the following data:

| Field | Data |
|---|---|
| Project | E-#### (#### is the number of the sales order) |

4. Choose .

### Set Filters

13. Select E-#### and choose .
2. To simply display the activities released for processing, choose → *Status-Dependent.*
3. In the dialog box, enter selection profile *Z1300*.

   You maintain the selection profile in customizing. It filters out objects whose status meets the conditions defined in the profile.

4. Choose ✔.

   The system displays only the activities or activity elements which have status *Released*, but not *(Finally) Confirmed*. These conditions are defined in profile Z1300.

5. Choose → *User-Defined*.

   You can now choose the criteria according to which you want the activities displayed.

6. In the *List* column (right), select the fields *Plant, Work* and *Work Center*, then choose .

7. On the *Selected Conditions* screen area, enter the following data:

| Field | Data |
|---|---|
| Plant | 1300 |
| Work center (Frm) | 2000 |
| Work center (End) | 2100 |

8. Choose .

   The next screen shows the activities or activity elements in the *Design* phase that you can now release for processing or confirm. Only the activities or activity elements that meet the status dependent conditions and are assigned to work centers 2000 or 2100 from plant 1300 are displayed.

### Create Confirmation Workflow

1. Choose .

2. Choose *Verify* → *Confirmation Workflow*.

3. In the dialog box, enter the following data:

| Field | Data | Description |
|---|---|---|
| Confirmation pool | E - #### - SPEC | Description |
| Description | Engineering | |
| Org.Unit | Select | Receiver Category |
| Object ID | 50000070 | Design Group |

4. Choose .

   The system displays a message, telling you that X list entries have been saved as list E####-SPEC.

   User WF-PS-1 has now received the pool as a work item in his or her inbox. When user WF-PS-1 executes the work item, the system automatically uses the pool to access the collective confirmation transaction.

   Here, you are making use of the integration between the Project System, Human Resources, and workflow.

   WF-PS-1 is the system user assigned in HR master record 1248. The employee with this personnel number is the design group leader. The standard task "PS Actual Data Entry" is assigned only to user WF-PS-1.

   This means that only the group leader has a work item with the pool of confirmations in his or her inbox, although the organizational unit covers a number of employees. If the group leader's item is to be transferred, the work item automatically appears in the new employee's inbox, assuming that his or her system user has the same configuration.

5. Choose .
6. Choose until the overview tree appears.

# Adapting the Application Function Bar

## Use

Before using various functions, such as filters, in the project information system, you need to enhance the dynamic menu bar as required. The selected functions are then immediately available.

## Procedure

11. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics or Accounting* → *Project System* → *Information System* → *Structures* → *Structure Overview* |
| **Transaction Code** | **CN41** |

12. If required, specify PS info profile `000000000001`, then choose ✔.

    The *Project Info System: Structure Initial Screen* appears.

13. Enter the project definition in the *Project* field.

14. Choose .

    The *Project Information System* screen appears.

15. Choose *Choose Functions.*

    A selection screen appears.

    The left side of the screen shows all the functions that are available; the right side shows the ones selected.

16. Click the arrow to the left of *Set Filter*.

    The system lists the functions possible for the icon

17. Position the cursor on the General function, press the left mouse button, and drag the cursor to the right side of the screen.

    When you release the mouse button, the system displays the selected function under the relevant icon.

18. Select the following functions in the same way:

| For Icon | Choose the Following Functions: |
|---|---|
| *Set Filters* | Status-dependent<br>User-defined |
| *Verify* | Create Confirmation Pool<br>Confirmation workflow |

19. Choose *Copy*.

    The system adds the selected icons to the menu bar. Click on an icon to list the functions selected for it.

You can now continue with processing or leave the report.

20. To exit the report, choose .

## Result

The system saves the settings on a user-dependent basis.The selected functions are available again the next time you access the structure overview or one of the individual overviews in the project information system.

# Releasing the Project

## Use

You release the whole project.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Special Maintenance Functions* → *Work Breakdown Structure* → *Change* |
| **Transaction Code** | CJ02 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project def. | E-#### (#### is the number of the sales order) |

3. Choose .
4. Select WBS element E-####.
5. Choose *Edit* → *Status* → *Release*.
6. To check the release of a WBS element, select the WBS element, then choose *Edit* → *Status* → *System/User status*.

   On the *Status* tab page, you see that system status *REL* is active. On the *Business transactions* tab, you see a list of the business transactions allowed or prohibited for the active status.
7. Choose .
8. Choose .
9. Choose until the overview tree appears.

## Result

The system has now released the production order.

The system status is effective for all lower-level objects within the hierarchy of the work breakdown structure.

# Partial Billing

## Use

The customer acceptance milestone is a billing milestone. This means that:

- The *Sales Document Date* indicator and the date key are maintained in the milestone
- The milestone has usage PS01, which means it is assigned to the first billing plan item

In the confirmation for the customer acceptance activity, the milestone is completed when you set the actual date. This automatically resets the billing lock in the planned item.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales and Distribution* → *Billing* → *Billing Document* → *Create* |
| **Transaction Code** | VF01 |

2. Enter the following data:

| Field | Data |
|---|---|
| Document | Your order number |

3. Choose .

   This takes you to the overview containing the billing item for the first partial billing document.

4. Select the item, then choose *Goto* → *Item* → *Billing Plan*.

   You see the data for the first partial billing document:

- Billing date
- Billing percentage
- Billing value

5. Choose .
6. To post the billing document, choose .
7. Make a note of the document number
8. Choose until you see the overview tree.

# Engineering

## Purpose

Note the following the design phase of the project:

- **Planning of required resources**

  In this example, the data covering activities, capacities, and PRT is already defined for all variants of the elevator.

  The required resources are, therefore, planned automatically when you enter the sales order. The network generated from the standard network already contains the data for activities, material, and so on, per the characteristic valuation in the sales order.

- Use **Work** to stipulate the activities to be carried out by machines or personnel in project execution, thereby planning the required capacity.
- **Services**, which are used to plan the activities involved in carrying out the project Services are processed using Purchasing.
- You assign materials to determine which components and raw materials need to be reserved or ordered for the project. Doing this creates the link to material requirements planning (MRP) and purchasing.
- Use **production resources and tools (PRT)** to stipulate the drawings, tools, or documents needed to carry out the project.

- **Some design activities are processed outside the SAP System.**

- Use **R/3 Document Management** to assign documents created in external systems to the project. You can not only store management data for CAD drawings, graphics, and so on, but can also display this data directly from the Project System.
- When you enter the final confirmation for the design activities, the subsequent activities for the procurement phase are automatically released.

## Process Flow

You can find the data for this process under [Page 325].

1. Plan Resources [Page 326]
2. Assigning Purchase Info Record and Vendor [Page 330]
3. Order Critical Components in Advance [Page 331]
4. Processing Design Activities [Page 332]

# Data for this Example

| Field | Data | Description |
|---|---|---|
| Prod. resources/tools | E-1901 | "Finite Element Program" equipment |
| Document | PS-ENG-000-00001 | "Finite Element Calculation" (TIF and PCX formats) |

# Plan Resources

## Use

In this section, you work with the project planning board.

The planning board is of central importance to the Project System. You can use the graphical interface to create, process, and evaluate all the data for a project, such as:

- Create and process project definitions, WBS elements, activities, milestones, and relationships
- Process dates and resources (work, material, and so on)
- Maintain progress analysis data
- Determine and display costs
- Carry out capacity leveling
- Access the information system and other reports

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Project Planning Board* → *Display Project* |
| **Transaction Code** | CJ2C |

2. Enter the following data:

| Field | Data |
|---|---|
| Project definition | E-# # # # |
| Plan.board prf | Elevators |
| w. activities | Select |

3. Choose *Open project*.

In the project planning board, you see an overview of the whole project.

The project planning board consists of two areas - a table and a Gannt chart.

In the table area, you can maintain detailed information on activities, WBS elements, and milestones. You can change the table setup as your project progresses.

You can use the Gantt chart area to change dates in activities, WBS elements, and milestones, and to link activities with each other in relationships.

4. Choose .

The *Legend* dialog box shows a list of the graphical elements used in the planning board, and explains what they mean.

5. Close the dialog box.

## Use

You plan and later confirm the activities to be perfomed internally in "internally processed activities" in your project.

The following data, among other things, has been maintained in the internally processed activities for the project, in respect of costing, scheduling, and capacity planning.

- The work center performing activity

  The work center contains data, such as the operating time or cost center, that concern the functions named directly or indirectly.

- Work and activity type

  Here, you plan the amount of work and, using the activity type, the type of work (for example: design work in hours). The system copies the activity type from the work center to the activity as a default value.

- Normal duration

  The value entered for the normal duration required to carry out an activity acts as a scheduling parameter.

## Procedure

1. In the planning board display, select the activities *Layout* and *Acceptance from customer*.

   To select more than one field, press the *Control* key while selecting the check boxes.

2. Choose .

3. In the dialog box, choose the *Internal* tab page.

   The dialog box shows the work center, work, and duration for the activity. This data is used to calculate, among other things, the capacity requirement.

4. Choose to proceed to the screen for the next activity.

5. Choose .

### Services

Technical acceptance of the elevator is performed by an external company.

Planning for this acceptance takes place in activity 2000 where service specifications are defined.

**Plan Resources**

The service specification divides the acceptance into the individual services to be performed. Larger service specifications can themselves be divided into groups and subgroups

Service masters are created for the individual services in the acceptance. These contain detailed data, such as a description and a price.

Each item in the specification references a service master, by way of the activity number.

Activity 2000, *Certification*, is assigned to the top WBS element, *Elevator*.

## Procedure

1. Select the activity *Certification*.
2. Choose .
3. In the dialog box, choose the *Extnl* tab page.
4. Choose *Service*.

   You see the service specification for acceptance, which is divided into three levels.
5. Select the lowest level (level 3) and choose as required.

   You see the service specification, showing the services planned in this level.
6. In service specification, choose .

   The total value in a grouping levels is calculated by adding together the prices for all the services planned in this level and the levels subordinate to it.
7. Choose twice.
8. To return to the project planning board, choose .

## Material

The material requirement for the project is determined automatically, on the basis of the characteristic valuation (variant configuration) in the sales order. The required material components were automatically copied to the network from BOM E-1000, using evaluation of the dependencies defined there. Sizes were also calculated automatically.

## Procedure

1. In project planning board screen, select activity *1020 Preprocurement of critical parts*.
2. Choose .

   The lower part of the screen shows the component overview. Only one material requirement is planned: *E-1700 Cable for Elevator*.
3. Double click item E-1700.

The dialog box shows the purchasing data for material E-1700, including the following information:

- The material managed under project stock in the procurement parameters. WBS element E-xxxx-2-2 "Cabin" is the requirements element.
- The top part of the shows the information "Prel.purchase Requisition for WBS Element". The activity has not triggered a requirement (reservation). Procurement of the cable covers the requirement for activity 1120 "Cabin Procurement", which has not yet been released.
- The system has adopted the earliest start date in the activity as the requirement date for the material.

4. Choose the *proc. param.* tab page.

As the material has item category *L* (stock), it is managed as part of project stock.

5. Choose the *Purch. Data* tab page.

A purchase requisition already exists. When final confirmation was entered for the "Customer Acceptance" activity, the activity "Advance Procurement of Critical Components" was released automatically, thereby triggering a purchase requisition. The purchase requisition number appears in the *P.Req.* field.

6. Choose *Pur.Req.*

You see the purchase requisition. When activity 1020 is released, purchasing can process the purchase requisition and convert it into a purchase order.

7. Choose .
8. Make a note of the purchase requisition number
9. Choose .
10. Choose until the overview tree appears.

# Assigning Purchase Info Records and Vendors

## Use

For the sake of simplicity, you order all your materials from the same vendor. You use existing purchasing info to assign the purchase order to vendor 1002.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Purchasing* → *Purchase Requisition* → *Follow-On Functions* → *Assign* |
| **Transaction Code** | ME56 |

2. Enter the following data:

| Field | Data |
|---|---|
| Purchasing group | 001 |
| Material | E-1700 |
| Plant | 1300 |

3. Choose .
4. Select your purchase requisition, then choose *Assign Automatically*.

   The system assigns vendor 1002 and the appropriate purchasing info record to the purchase requisition.

5. Choose .

# Order Critical Components in Advance

## Prerequisites

You create a purchase order for the vendor. To this end, you select the assigned purchase requisition.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Materials Management → Purchasing → Purchase Requisition → Follow-On Functions → Create Purchase Order → Via Assignment List* |
| **Transaction Code** | ME58 |

2. Enter the following data:

| Field | Data |
|---|---|
| Purchasing group | 001 |
| Vendor | 1002 |
| Plant | 1300 |
| WBS Element | E-####-2-2 |

3. Choose .
4. Select the line *1000 NB 1000* and choose *Process assignment*.
5. If the system displays the *Create Purchase Order: Extension Option* dialog ox, choose *New Purchase Order*.
6. Choose .

   The *Create Purchase Order* screen appears. In the standard, the middle part of the screen shows explanatory documentation.
7. To close the documentation, choose .

   The left part of the screen now shows a document overview. If it does not, choose *Document Overview On*. Adapt the screen area as necessary.

   On the right-hand side of the screen, you see the work area for the activity.
8. Select your purchase requisition in the document overview, then choose .

   The system copies the purchase requisition item to the purchase order.
9. Choose .

   The system confirms the posting and displays a purchase order number. Make a note of this number.

# Processing Design Activities

## Use

To process design activities, you must carry out the following processes in the R/3 System:

Assign design documents

The documents are created in external system, the data required is entered in the R/3 System, and the documents are assignment to the appropriate activities in the project.

Confirmation of design activities

When design is complete, procurement is automatically released.

A worklist was assigned to user WF-PS-1 in the Sales and Distribution using Workflow section. It covers mechanical and electrical activities and activity elements.

## Procedure

1. Log on to your IDES System as user **WF-PS-1**. Enter the following data in the logon screen:

| Field | Data |
|---|---|
| User | WF-PS-1 |
| Password | WELCOME |
| Language | De,En,Fr,Sp |

2. Choose .
3. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Project Planning Board* → *Change Project* |
| **Transaction Code** | CJ2B |

4. Enter the following data:

| Field | Data |
|---|---|
| Project definition | E-# # # # |
| Plan.board prf | Elevators |
| w. activities | Select |

5. Choose *Open project*.

   You see the graphical overview of the entire project.

6. Select the activity *Specification Mechanical Equipment (1030).*
7. Choose *Goto* → *Documents*.

   A dialog box appears, showing an overview of the documents linked to the activity.

Information on the design documents created in external systems has already been entered in R/3 document management. You assign the technical drawing using the appropriate document.

8. In the dialog box, enter the following data:

| Field | Data |
|---|---|
| Type | DOC |
| Document | PS-ENG-000-00001 |

9. Position your cursor on the line entered and choose .

   You see the basic data screen for the assigned document.

   The *Originals* frame shows the references to the original files.

   The original document is stored in two different file formats.

   From the R/3 System, you can start an application on your computer to display the documents. See the Document Management documentation for details of the relevant prerequisites.

   You see the storage data for the originals. The originals of this document are copied to the SAP database. For example, a database server may be specified, specifying file path and the name of the original file.

   To display the original screen, you require:

   – Windows 95/NT

   – A screen processing program that is assigned to files with TIF or PCX format

10. Choose , then .

11. To save the document assignment, choose .

# Final Confirmation of Design Activities

## Use

The design activities for the cabin cannot start until the design activities for the electrical and mechanical components are complete.

To make this example easier, confirm activity 1070 (Cabin design) now. This releases all the activities in all the project phases from the procurement phase for processing.

## Procedure

1. Call up the transaction as follows:

| Menu Path | *Office* → *Workplace* |
|---|---|
| **Transaction Code** | SBWP |

2. Choose *Inbox* → *Workflow* → *Grouped according to task.*

3. Choose *PS Entry Actual Data*.

The work item is opened in the right-hand side of the screen.

4. To process the pool of confirmations, select the item and choose .

   The collective confirmation, with the design activities to be prorcessed, is accessed automatically.

5. Set all the indicators in the final confirmation column.

6. Choose .

7. In the dialog box, choose *Complete work item*.

   The work item is flagged as complete.

# Procurement

## Purpose

The "Procurement" project phase covers procurement of material components and their delivery to the construction site.

This process deals with the following procurement options:

- The mechanical and electrical components are kept in stock. They are reserved when the appropriate procurement activities are released. They are then managed as plant stock.
- Cabin door E-1317 is managed as project stock. E-1317 was created as a non-stock material item and is procured externally when required. The door dimensions are calculated automatically as part of characteristic valuation, and made available to purchasing in the form of a bill of material (BOM). The requirement (reservation) is not created until the cabin is released for procurement.
- Owing to the long delivery time, cable E-1700 has already been ordered. Being a material that requires advance ordering, E-1700 is managed as project stock. Purchase order and reservation are matched and allocated using the WBS element that gives rise to the requirement.

You can find more information about this process under [Page 337].

## Process Flow

1. Assigning the Vendor [Page 338]
2. Creating a Purchase Order [Page 339]
3. Material Requirements Planning [Page 340]
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# Additional Information for this Example

Activities such as purchase order, production, and delivery are combined, to make this example clearer. As you can see from the relationships in the network, these activities do not take place simultaneously for all the components in the elevator.

### External Procurement

Cabin door E-1317 is procured externally. When the activity is released, the system automatically creates a purchase requisition, which you then convert into a purchase order.

When the goods receipt is executed, the system posts the single stock material to the project stock.

### In-House Production

The 50kW motor E-1500 and cabin E-1300 are produced in plant 1300 and managed as project stock:

When the activity is released, a reservation is created to cover the requirement; the WBS element for the activity is the planning element that caused the requirement.

The MRP run converts the reservations into planned orders. The secondary requirements for E-1500 and E-1300 are covered using a reservation on the components kept in stock.

When final confirmation is entered for the productions orders, materials E-1500 and E-1300 are posted to project stock.

In this process, delivery is from the Project System. The components to be delivered for the network are selected and entered in a delivery document. Further delivery processing takes place in Sales and Distribution.

### Activity Confirmation

Procurement activities are confirmed using the time sheet. Employees responsible for procurement enter the work they have done in timesheets. In the next step, the times they enter are transferred to the Project System and Human Resources.

# Assigning Vendors

## Use

You assign your purchase requisition to a vendor, using and existing purchasing info record.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Purchasing* → *Purchase Requisition* → *Follow-On Functions* → *Assign* |
| **Transaction Code** | ME56 |

2. Enter the following data:

| Field | Data |
|---|---|
| Purchasing group | 001 |
| Plant | 1300 |
| WBS Element | E-####-2-2 |

3. Choose .
4. Select your purchase requisition, then choose *Assign Automatically*.

   The system assigns vendor 1002 and the appropriate purchasing info record to the purchase requisition.

5. Choose .

# Creating a Purchase Order

## Use

When activity 1120 *Cabin Procurement* is released, the system creates a purchase requisition for cabin door E-1317, which is to be procured externally.

You have assigned this purchase requisition to vendor 1002. It can be converted into a purchase order without further processing.

## Procedure

10. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Purchasing* → *Follow-On Functions* → *Create Purchase Order* → *Via Assignment List* |
| **Transaction Code** | ME58 |

11. Enter the following data:

| **Field** | **Data** |
|---|---|
| Purchasing group | 001 |
| Plant | 1300 |
| WBS Element | E-####-2-2 |

12. Choose .
13. Select the line *1000 NB 1000* and choose *Process assignment*.
14. In the dialog box, choose .
15. Select your purchase requisition in the document overview, then choose .
16. Choose *Item overview* if required.

    The system copies the purchase requisition item to the purchase order.
17. Choose .
18. In the dialog box, choose *Save.*
19. Confirm any warnings by choosing .

    The system confirms the posting and displays a purchase order number. Make a note of this number.

# Material Requirements Planning

## Use

Up to the procurement phase of the project, only the primary requirement is planned for the cabin and the 50kW motor, in the form of the material components E-1300 and E-1500 assigned in the network.

BOMs and routings have been created for the cabin and the motor. A project-related MRP run generates planned orders for the procurement of both assemblies.

The assembly BOMs E-1300 and E-1500 are exploded in the planning run. Secondary requirements are generated for the components. When exploding the BOM, the MRP run takes account of the characteristic valuation from the sales order. The dimensions for the cabin walls and the selection of components, such as whether to use wood or metal for the walls, are based on the valuation in the sales order.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Project System → Material → Planning → MRP Project* |
| **Transaction Code** | MD51 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project def. | E-# # # # |
| Create pur.req. | 2 |
| Planning mode | 1 |
| Delivery Scheduling | 3 |
| Scheduling | 1 |
| Also plan unchanged components | Select |
| Display results before saving | Select |
| Display material list | Select |

3. Choose .
4. Confirm any warning messages by choosing .

   The *Next Stopping Point* dialog box appears.

   The following options for executing the planning run are available:

   - You can separately view and process the planning result for all or some of the components in the material before saving the whole planning result. To do this, choose *Plan up until stopping point*.
   - You can plan the remaining BOM levels without any further interruptions. To do this, choose *Proceed without stopping*.

5. To plan further without breakpoints, select the *Proceed without stopping* and choose *Continue.*

   You now see the statistics for the planned materials. You can branch from here to a material overview or a project report.

6. Choose *Project Report.*

   The dialog box shows a list of the materials (primary requirements) managed as project stock.

7. Choose , then .

   The system shows an overview of the material situation in all BOM levels.

   You see the scheduled receipt elements for each requirements element.

| Requirements Element | Receipt Element | | |
|---|---|---|---|
| Reservation | E-1500 | Motor unit | Planned order |
| Reservation | E-1300 | Cabin | Planned order |

   The secondary requirements for cabin E-1300 and motor E-1500 are covered by reservations. Only components held in stock are assigned to the two planned orders. The reservations are not generated until the planned order is converted into a production order

   For this reason, the project report does not show any receipt elements (purchase requisitions or planned orders) for these components.

   To make the process simpler in this case, the planned orders are converted into production orders in the project report and the production orders are released for processing. Carry out the following processing steps for the planned order under *E-1500 Motor Unit* or *E-1300 Cabin*.

8. Place the cursor on the planned order under *E-1500 Motor Unit* or *E-1300 Cabin* and choose *Detail → Plnd Ord. –> Prod. Ord.*

   The *Create Production Order: Header* screen appears.

9. Choose .

   This takes you to the *Create Production Order: Component Overview* screen, showing the material components for the Motor/Cabin.

10. Choose .

11. Choose .

    The system confirms the posting and assigns a document number. Make a note of this number.

12. Repeat this business transaction for the second planned order.

13. Choose until you see the overview tree.

# Monitoring Production and Procurement

## Use

The order report gives you and overview of the current state of component procurement and production in your project. The system determines which receipt elements are scheduled for each requirement element. The MRP controller can check how advanced production is for the project or in which BOM level and for which components scheduling or other difficulties exist.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Material* node, choose *Planning* → *Order Report* |
| **Transaction Code** | MD4C |

2. Select *Project* and enter your project (*E-####*) in the field.
3. Choose .

   The *Reservations for Project E-####* dialog box appears.
4. Choose , then .

   The *Order Report* screen appears.
5. Choose *All*.

   You now see the list of all the material components in your project, and the current procurement situation.

   Production orders (receipt elements) have been scheduled in relation to the reservation (requirements elements) for the cabin and motor.
6. Choose until you see the overview tree.

# Posting the Goods Receipt

## Use

In this process step, you post the goods receipt of the single item, externally procured material components rope E-1700 and cabin door E-1317.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Follow-On Functions* → *Goods Receipt* |
| **Transaction Code** | MIGO |

2. In the right-hand screen area, enter the following data:

| Field | Data |
|---|---|
| Purch.order | One of your purchase order numbers |

Use the input help in the *Purchase order* field if you want to search for the numbers. In the dialog box, choose the *Purchasing Documents for Project* tab page, enter E-####-2-2 in the *Project* field and choose ✔. In the resulting list, select your purchase order, then choose ✔. The system copies the number into the input field.

3. Choose .

   The system transfers the purchase order items from the purchase requisition to the item overview.

4. Repeat this for the second purchase order.
5. Mark the OK indicator for the items in the item overview.

   If the OK indicator is not active in the item overview, close the item detail area or set the *Item OK* in the lower area of the item detail.

6. Choose *Post*.

## Result

When the goods receipt is executed, the system posts the single stock material to the project stock.

# Settling the Goods Receipt

## Usage

You post the automatic goods receipt for the externally procured components "Cable" and "Cabin Door".

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Automatic Settlement* → *Execute ERS* |
| **Transaction Code** | MRRL |

2. Choose for the *Purchasing document* field.
3. In the dialog box, choose the *Single vals* tab page.
4. On the tab page, enter the purchase order numbers you noted earlier and choose .
5. Deselect *Test run*.
6. Choose .

   You see the log of the posted invoices.

# Confirming the Production Order

## Use

The production of the cabin and motor is represented in simplified form in this process because the integration of the Project System with production but not with the processes within production is to be represented.

- The routings for planning group E-1000 both consist of a roughly structured sequence of activities.
- A milestone activity closes each sequence.
- The milestone components have been assigned with the *Backflush* indicator.
- The milestone activities were created with the *Automatic Goods Receipt* flagged.

The system automatically posts the following when an order is finally confirmed:

- The services rendered in the individual activities
- The goods issues for the components used
- The goods receipts to project stock for the assemblies produced

## Prerequisites

To be able to post all goods movements in the procurement phase, you must release the WBS elements to which assignments are to be made.

In this example, E-####-2 is the top WBS element in the procurement subhierarchy. The lower-level WBS elements are the account assignment elements for the procurement activities in the network.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Production* → *Production Control* → *Confirmation* → *Enter* → *For Order* |
| **Transaction Code** | CO15 |

2. Enter the following data:

| Field | Data |
|---|---|
| Order | The number of one of your production orders |

3. Choose .

4. Enter the following data:

| Field | Data |
|---|---|
| Final conf. | Select |
| Yield to Conf. | 1 |
| Un. | PC |

5. Choose .
6. Repeat steps 2 to 5 for the second production order.
7. Choose .

## Result

Final confirmation with quantity of one piece has been entered for the production order. The system simultaneously posted the material to project stock.

# Assembling Deliveries

## Use

You copy the components to be delivered from the Project System to the Sales and Distribution system for further processing.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Project System → Material → Execution → Delivery from Project* |
| **Transaction Code** | CNS0 |

2. Enter the sales order number in the Sales Order field and choose *Components.*

3. Enter the following data in the General Data dialog box:

| Field | Data |
|---|---|
| Shipping point | 1300 |
| Plan Gds Mvm | Today's date |
| Ship-to party | 1600 |
| Sales org. | 1000 |
| Distribution channel | 10 |
| Division | 00 |

4. Choose *Copy*.

   The screen shows all the delivery-relevant material components in the project, with the requirements dates from network scheduling.

   In the current network, these are the dates as of which the material components are to be available for delivery. Deliveries can be assembly in line with the requirements dates.

   As you chose today's date for the goods issue, only the components already in stock can be delivered. The system sets the delivery quantity in the appropriate delivery items to the same level as the requirements quantity (default value),

5. Choose .

6. In the *General Data* dialog box, set the data planned date to the latest requirements date from the delivery item list.

7. Choose *Copy*.

   The delivery and requirements quantities are now the same in all the items in the Delivery from Project: Process Delivery Items screen.

8. To save the delivery document, choose .

   The system confirms the posting and displays a number. Make a note of this number.

9. Choose .

# Posting the Goods Issue

## Use

Before the materials can be shipped, they must first be picked. You then carry out the goods issue for the elevator components.

WM picking is executed using a transfer order, which allows you to start and monitor movements within a warehouse complex. The transfer order is the basis for the picking list, which is used to withdraw the ordered goods from stock.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales and Distribution* → *Shipping and Transportation* → *Outbound Delivery* → *Change* → *Single Document* |
| **Transaction Code** | VL02N, LT03 |

2. On the *Change Outbound Delivery* screen, enter your delivery number, then choose .
3. Choose *Subsequent Functions* → *Create Transfer Order*.
4. In the dialog box, choose *Yes*.
5. Enter the following data:

| Field | Data |
|---|---|
| Warehouse number | 013 |
| Plant | 1300 |
| Delivery | Defaulted by the system |
| Select item | Select |
| Foreground/ Backgrnd | Background |
| Adopt picking quantity | 2 |

6. Choose .

If the *Exit Plan Reconciliation* dialog box appears, choose *Yes*.

## Result

The system creates a transfer order for the picking of the delivery. Option 2 (Adopt picking quantity) ensures that the goods issue posting is made at the same time as the delivery.

# Entering Working Times

## Generate Pool of Confirmations

## Use

Employees responsible for procurement enter the work they have done in timesheets. The employee takes the activities to be confirmed from the pool of confirmations produced in the project information system

## Procedure

1. Access the structure overview in the project information system as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* or *Accounting* → *Project System* → *Information System* → *Structures* → *Structure Overview* |
| **Transaction Code** | CN41 |

2. If required, specify PS info profile `000000000001`, then choose .

   The *Project Info System: Structure Initial Screen* appears.

3. Enter the following data:

| Field | Data |
|---|---|
| Project | E-# # # # |
| Additional selection criteria | Delete |

4. Choose .
5. Select the project definition and choose .
6. Choose → *User-Defined*.

   If the icon does not appear in the menu bar, adapt your application function bar [Page 354] .
7. Select the work center in the right-hand side of the screen and choose .
8. Enter the following data:

| Field | Data |
|---|---|
| Work center (Frm) | 2300 |

9. Choose .
10. Select the line for your project and choose .
11. Choose .
12. Choose *Verify* → *Create Confirmation Pool*.
13. Enter the following data:

| Field | Data |
|---|---|
| Confirmation pool | E-####-PROC |
| Description | Procurement |

14. Choose ✔.
15. Choose .

# Entering Working Times

## Use

In this step, you adopt the default values from the worklist, without changes, as the work time you want to enter. There is no need to release or approve the times entered.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Progress* → *Confirmation* → *Time Sheet* → *Time Data* → *Enter* |
| **Transaction Code** | CAT2 |

2. Enter the following data:

| Field | Data |
|---|---|
| Data entry profile | 13000000 |
| Personnel number | 1255 |

   Data entry profile 1300000 determines the process for entering data and how the time sheet appears for confirming the process. For example, it determines which data can be maintained.

3. Choose .
4. Enter the following data:

| Field | Data |
|---|---|
| Key date | Today's date |
| Confirmation pool | E-####-PROC |

5. Choose .
6. To confirm the message, choose ✔.

   The *Time Sheet: Data Entry View* is divided into the following areas:

   – The upper table area for the worklist shows the procurement activities to be confirmed. The work times planned for the activities appear as defaults in the worklist, distributed over the duration of the activity. The first and last work days are the same as the earliest start and finish dates from network scheduling.

– The lower table area is the entry area, where you maintain the work times. The times are entered per day in the data entry period shown. In the profile, you have entered a week as the data entry period.

  You can scroll through the calendar to scroll into the past or future. Use the scroll keys next to the fields in the data entry fields to do this.

7. Choose until a default value for the required work time appears in the upper part of the screen for one of the activities.
8. Select the line and choose .

   The system copies the activities and work times for the data entry period to the data entry part.
9. Choose the subsequent data entry periods and copy the work times over as described.

   Depending on the schedule situation in the network, the procurement activities are distributed over two or three weeks.
10. Choose .
11. Choose .

# Transferring Work Times to the Project System

## Use

The times entered are saved in the work sheet. As the current profile settings mean that the work times entered are not to be approved or released, you can transfer the data to the Project System in the very next step.

Transferring the data to the Project System automatically confirms the procurement activities. The system also transfer the work times reported to Human Resources.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Time Sheet* node, choose *Transfer* → *Project System* → *Transfer.* |
| **Transaction Code** | CAT5 |

2. Enter the following data:

| Field | Data |
|---|---|
| Personnel number | 1255 |
| Posting date | Today's date |
| Log | Select |
| Test run | Deselect |

3. Choose .

4. If the *Confirm Activity* dialog box should appear, choose *Yes* until the program runs.

   The transfer program outputs a detailed log of the confirmations transferred. A confirmation document is created for each day.

# Adapting the Application Function Bar

## Use

Before using various functions, such as filters, in the project information system, you need to enhance the dynamic menu bar as required. The selected functions are then immediately available.

## Procedure

21. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics or Accounting* → *Project System* → *Information System* → *Structures* → *Structure Overview* |
| **Transaction Code** | **CN41** |

22. If required, specify PS info profile `000000000001`, then choose .

    The *Project Info System: Structure Initial Screen* appears.

23. Enter the project definition in the *Project* field.

24. Choose .

    The *Project Information System* screen appears.

25. Choose *Choose Functions.*

    A selection screen appears.

    The left side of the screen shows all the functions that are available; the right side shows the ones selected.

26. Click the arrow to the left of *Set Filter*.

    The system lists the functions possible for the  icon

27. Position the cursor on the General function, press the left mouse button, and drag the cursor to the right side of the screen.

    When you release the mouse button, the system displays the selected function under the relevant icon.

28. Select the following functions in the same way:

| For Icon | Choose the Following Functions: |
|---|---|
| *Set Filters* | Status-dependent<br>User-defined |
| *Verify* | Create Confirmation Pool<br>Confirmation workflow |

29. Choose *Copy*.

    The system adds the selected icons to the menu bar. Click on an icon to list the functions selected for it.

You can now continue with processing or leave the report.

30. To exit the report, choose .

## Result

The system saves the settings on a user-dependent basis.The selected functions are available again the next time you access the structure overview or one of the individual overviews in the project information system.

# Assembly

## Purpose

In the Assembly project phase, you put the elevator components together on site.

You monitor and confirm the progress of the work. You use the confirmation option in the Internet.

Technical acceptance is carried out by an external firm, in line with the service specifications defined in the project.

In line with progress of the project, the last two items in the billing plan are billed to the customer.

## Process Flow

Confirmation Using The Internet [Page 357]

# Confirmation Using The Internet

## Use

You have conducted an on-site check, to ensure that the prerequisites for starting work on assembling the elevator have been met - for example, that all the necessary components have been delivered. You use the Internet to confirm the result of activity *1130 First progress check*. Use the search tool in the Internet to find the appropriate network.

## Prerequisites

You can only confirm work over the Internet if you are working in an IDES system that is connected to an Internet Transaction Server (ITS). Ignore this activity if you do not have such a system. It is not essential to further processing.

For confirmation over the Internet, an Internet user must be created in the R/3 System, with all the appropriate authorizations. Internet user WF_PS-1 is created for confirmation purposes in the IDES system.

## Procedure

1. Switch to your Internet Browser (for example, Netscape Navigator or Microsoft Internet Explorer).
2. Access the IDES home page and choose the language you want.

   If you do not know the Internet address of the IDES home page, ask your system administrator.
3. Choose *Internal Service*.
4. Choose *Management Service*.
5. Choose *Projects* → *Project Data Confirmation*.
6. Log on as follows:

| Field | Data |
|---|---|
| User | WF-PS-1 |
| Password | WELCOME |
| Language | DE |

7. Choose .

   The *Project Data Confirmation* screen appears.
8. Choose *Individual Confirmation*.
9. To find the network for activity 1130, enter "Elevator" in the short text field.
10. Choose *Find.*

    The system lists all the networks whose names begin with the work "Network".
11. Select the network you want to process from the network list.

The system lists all the activities in the network.

12. Click activity 1130 *First progress check*.

    The system copies the network and activity numbers into the appropriate fields in the individual confirmation area.

13. Choose *Display*.

    The system checks the status of the activity. If the status allows confirmation, the right-hand side of the screen shows the activity data requiring confirmation. If it does not, an error message appears.

14. Enter the following data in the *Confirmation* section of the screen:

| Field | Data |
|---|---|
| Start date | Today's date plus 5 weeks |
| Finish date | Today's date plus 5 weeks |
| Work | 11 (hours) |
| Confirmation text | Delay |
| Complete | Select |

15. Choose *Save*.

    The R/3 System displays the message *Your confirmation was saved* and displays the confirmation data in the *Confirmation* screen area.

16. Choose *Exit* to return to the IDES home page.

# Period-End Closing for a Customer Project

## Usage

In this IDES process, you carry out a month-end closing. To do this, you first post all period-based data on the project. You then determine the data relevant to Profitability Analysis (CO-PA) for the given period, and settle this data to CO-PA. You can evaluate the data either in the project information system, or in Profitability Analysis.

## Prerequisites

This IDES process is based on the data from the process *Make-to-Order Production of Elevators*. You should carry out this process before you start the period-end closing.

## Procedure

You can find the data for this process under [Page 360].

1. Actual overhead rates

   The system calculates the overhead [Ext.] and updates them in the project.

   See also Determining Overhead Rates [Page 361] and Evaluating Project Data by Cost Element [Page 363]

2. Settlement generation

   Before you carry out results analysis and settlement, you first need to have correctly maintained the settlement rule and the PA transfer structure. The system generates the relevant entries automatically when it generates the settlement rule.

   See Generating the Settlement Rule [Page 365] and Checking the Settlement Rule [Page 367].

3. Results analysis

   The system determines by period the data relevant to results analysis, such as, work-in-process and inventory costs.

   See Executing Results Analysis [Page 368]

4. Settlement

   You settle the data from results analysis to the profitability segment. This means that the project data is now available to Controlling.

   See Executing Settlement [Page 370] and Displaying Line Items [Page 372].

# Data for this Example

| | |
|---|---|
| Controlling area | 1000 |
| Company code | 1000 |
| Plant | 1300 |
| Project currency | DEM |
| Project | E-#### (#### is the number of the sales order from the IDES scenario *Make-to-Order Production of Elevators*). |
| Project profile | 1000 |
| Costing sheet | 130000 |
| Strategy for generating the settlement rule | 10 |
| Results analysis key | 130000 |
| RA version | 000 |
| PA Transfer Structure | 30 |
| Settlement profile of the billing element | 130000 (to be settled in full = 100%) |
| Settlement profile of the lower-level WBS elements | 130002 (not to be settled) |
| Period | Current period |
| Fiscal year | Current fiscal year |
| Operating concern | IDEA |
| Type of Profit. Analysis | Costing-based |

# Calculating Overhead Rates

## Usage

Overhead rates are used to allocate the costs of a cost center that has no direct reference to the activity quantities received.

In this step, the system calculates the overhead rates on the basis of the direct costs posted on the project activities.

In the plan, the system determines the planned overhead rates of the project activities automatically as part of network costing. In the actual, you have to calculate and update the actual overhead rates explicitly.

## Prerequisites

You must have defined a costing sheet in Customizing. The parameters for the overhead calculation are summarized in the costing sheet. In this demo, we use costing sheet 130000.

The costing sheet must be assigned to the project objects.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Project System → Financials → Period-End Closing → Single Functions → Applied Overhead → Individual Processing, Actual* |
| **Transaction** | CJ44 |

2. If the *Set Controlling Area* dialog box appears, enter the following data:

| Field | Data | Description |
|---|---|---|
| Controlling area | 1000 | CO Europe |

3. Choose .

4. Enter the following data:

| Field | Data |
|---|---|
| Project definition | E-#### (#### is the number of the sales order) |
| Include orders | Select |
| Period | Current period |
| Fiscal year | Current year |
| Test run | Deselect |
| Detailed lists | Select |

5. Choose *Overhead calculation → Execute*.

   You see a log with general information about the processing type of the overhead calculation.

6. To get detailed information about the overhead rates, choose .

7. Choose to leave the log.

## Result

The system calculates the overhead rates and updates them by cost element on the project activities under overhead cost elements (category 41).

# Evaluating Project Data by Cost Element

## Use

To evaluate project data by cost element, the project information system provides you with various standard reports. These reports offer you an overview by period of the updating of the data on the project. To carry out a more exact analysis, you can branch from the line item display to the document display.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* or *Logistics* → *Project System* → *Information System* → *Financials* → *Costs* → *Plan-Based* → *By Cost Element* → *Actual/Plan/Variance Absolute/Variance %* |
| **Transaction** | S_ALR_87013543 |

If you are calling up a cost element report for the first time since logging on to the system, the system requests you to enter a database profile. Enter 130000000000, then choose ✔:

2. Enter the following data on the selection screen:

| Field | Data |
|---|---|
| Project definition | E-#### (#### is the number of the sales order) |
| Controlling area | 1000 |
| Plan version | 000 |
| From fiscal year | Current year |
| To fiscal year | Current year |
| From period | 1 |
| To period | 12 |

3. Choose .

   The report shows the allocation of the values by cost element. You can analyze, for example, the overhead costs separately from the direct production costs.

4. To call up the line item reports, double-click a report row.

   The *Project Line Item Selection* screen appears.

5. Position your cursor on the line item report you want to display, then choose ✔ *Copy*.

   The system branches to the line item display.

6. To display the original document, double-click a document date in the line item display.

7. Choose to quit the document display or line item display. Confirm the dialog prompt with *Yes*.
8. Choose until you reach the overview tree.
9. Choose *Yes* in the dialog box.

# Generating the Settlement Rule

## Use

To carry out results analysis and settlement, you need to maintain the relevant profiles and settlement rules for all project objects relevant to the settlement.

In this project step, you use automatic settlement generation to generate the relevant profiles and settlement rules on the WBS elements.

The system uses the default values of the network type to automatically assign a settlement rule to the project activities.

## Prerequisites

In Customizing, you must have defined the strategy for the generation of the settlement rule, and assigned this to project profile 1000.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Project System → Financials → Period-End Closing → Single Functions → Settlement Rule → Individual Processing* |
| **Transaction** | CJB2 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project definition | E-#### (#### is the number of the sales order) |
| With hierarchy | Select |
| Period | Current period |
| Fiscal year | Current year |
| Test run | Deselect |
| Detail list | Select |

3. Choose .

   You see the basic list of the log.

4. To call up detailed information on settlement, choose .

   The lists shows you, for example, the strategy used and the generated settlement profile.

5. Choose to leave the log.

## Result

As defined in strategy 10, which is stored in the project profile, the system generates a settlement rule, and, if required, a PA transfer structure, for each WBS element.

**Generating the Settlement Rule**

Strategy 10 specifies that the billing element is to be settled 100% periodically to the profitability segment. All of the lower-level WBS elements are not settled.

# Checking the Settlement Rule

## Use

When you generate the settlement rule, the system adopts various data from the sales order, for example, the division from the sales order header. In line with the settlement rule, the relevant data is settled to CO-PA.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* or *Logistics* → *Project System* → *Project* → *Special Maintenance Functions* → *Work Breakdown Structure* → *Change* |
| **Transaction** | CJ02 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project definition | E-##### (##### is the number of the sales order) |

3. Choose .
4. Choose the *Control* tab to check the results analysis key.
5. Select your WBS element (first line) and choose *Settlement Rule*.

   A 100% periodic settlement to the profitability segment is defined in the settlement rule.
6. To check the value fields transferred to the profitability segment, proceed as follows:
   a. Position the cursor on the settlement rule.
   b. Choose .
   c. In the settlement receiver section, choose  in the profitability segment.
   d. In the *Division* field, you see the default value 06 (elevators). If it is not there, enter it.
   e. Choose *Continue*.
9. Choose  until you reach the *Change Cost Planning: WBS Element Overview* screen appears.
10. Choose .
11. Choose  until you reach the overview tree.

# Executing Results Analysis

## Use

In this process step, you carry out revenue-based results analysis on the billing element. You use results analysis to determine, for example, the work in process or the cost of sales for a given period.

## Prerequisites

A results analysis key must be assigned to the billing element.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Project System* → *Financials* → *Period-End Closing* → *Single Functions* → *Results Analysis* → *Proceed* → *Individual Processing* |
| **Transaction** | KKA2 |

2. Enter the following data:

| Field | Data |
|---|---|
| WBS Element | E-##### (##### is the number of the sales order) |
| Period | Current period |
| Fiscal year | Current fiscal year |
| RA version | 000 |

3. Choose .

   As well as the planned and actual data, the system also displays the results analysis data.

4. Choose .

5. Choose until you see the overview tree.

## Result

In the results analysis key and the results analysis version, you defined that the system should execute revenue-based results analysis, that is, the system updates the following results analysis data on the billing element for Financial Accounting and settlement to Profitability Analysis:

- Actual revenue (FI and CO-PA)
- Cost of sales (CO-PA)
- Provisions for missing costs or work in process (FI)

This data is updated under the results analysis cost elements defined in Customizing.

The system does not take into account the assigned production orders for projects with valuated sales order or project stock. The WIP calculation occurs separately on a production order.

# Executing the Settlement

## Usage

Projects are used to collect costs on a temporary basis. During period-end closing, the system settles the costs and revenues incurred on the project.

In the settlement rule, you stipulated that the actual results analysis data of the billing element is to be settled to Financial Accounting and to the profitability segment. The costs of the lower-level objects were included in the calculation of the results analysis data on the billing elements, and cannot therefore be settled separately.

In this process step, you settle the profits of the given period to Profitability Analysis, and post the provisions or inventory costs to Financial Accounting.

## Prerequisites

You must have carried out results analysis.

A settlement rule must have been maintained for all project objects.

The automatic settlement rule generation has:

- Assigned a settlement rule for the profitability segment to the billing element.
- Assigned a settlement rule to all of the lower-level objects that prohibits settlement.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Project System* → *Financials* → *Period-End Closing* → *Single Functions* → *Settlement* → *Individual Processing* |
| **Transaction** | CJ88 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project definition | E-#### (#### is the number of the sales order) |
| With hierarchy | Select |
| Include orders | Select |
| Settlement period | Current period |
| Fiscal year | Current fiscal year |
| Processing type | Automatic |
| Posting period | Current period |
| Test run | Deselect |
| Detail list | Select |

3. Choose .

   You see a log with general information about the processing.

4. To get information about the senders, receivers, and the settlement amount, choose .
5. Choose until you reach the overview tree.

# Displaying the Line Items

## Usage

Once the customer project has been billed and settled, you can evaluate the data in Profitability Analysis. The documents are updated under record type C (Settlement of orders and projects).

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Controlling* → *Profitability Analysis* → *Information System* → *Display Line Item List* → *Actual* |
| **Transaction Code** | KE24 |

If you are using profitability analysis for the first time, the system asks you to enter the operating concern.

2. In the dialog box, enter the following data:

| Field | Data |
|---|---|
| Operating concern | IDEA |
| Costing-based | Select |

3. Choose ✔.
4. In the dialog box, choose *Yes*.
5. Enter the following data:

| Field | Data |
|---|---|
| Currency type | B0 |
| Period / year | Current month/year (##.####) |
| Entered by | Your user name |

6. Choose .
7. In the dialog box, choose ✔.

   You see a list of the actual line items transferred to Profitability Analysis.
8. Choose one of the line items you created.

   The *Characteristics* tab page contains, among other things, the following information:

   - Customer
   - Sales organization
   - Distribution channel
   - Sales order number

- Product-related data

  The product number is the material number of billing element E-1000. You can also see the relevant assignments, for example, at plant and profit center level.

  Characteristics exist for all dimensions that can be used for analysis purposes in Profitability Analysis. These characteristics values are derived from the customer and material master data and from SD partner roles (such as sales representatives) or from CO-PA-specific characteristics.

8. Choose the *Value fields* tab page.

   You see the detailed information for order and billing quantities, revenues, discounts and detailed product cost components, which are derived from the Sales and Product Costing areas. Note that the list of value fields is more than one screen long.

9. Choose to scroll through the value field screens.

   The billed quantity amounts to 1 piece, with the corresponding revenue of

   59,821.05 euros (EUR).

   You see, for example, the cost of goods sold. This value was taken from the order settlement, and is identical to the COGS from Profitability Analysis.

10. Choose until you reach the overview tree.

# Evaluating the Project Data in the Business Information Warehouse

## Purpose

You are the project leader / project controller and you require for project data a meeting. To do this, you transfer data from your R/3 System into the Business Information Warehouse System (BW) using predefined InfoCubes.

You analyze the date of the SAP Business Information Warehouse using the Business Explorer Browser, from which you can call up various reports (queries). The information displayed in Excel is summarized in the background from the datasets.

To find out more about this process, see the SAP Library for the Business Information Warehouse.

For information about the Project System , see *Business Content* → *Project Management.*

## Prerequisites

You can only run this process since release BW2.1C.

You need a project. You load the data into your BW System. If you do not create your own project, you should use the data contained in the standard project T-20301.

In addition to your user ID in the IDES R/3 System, you will require a user ID for your BW System.

The following roles must be assigned to your user in the BW System:

| Role | Description |
|---|---|
| SAP_BWC_0ROLE_0051 | Project controller |
| SAP_BWC_0ROLE_0052 | Project leader |

You must install the Business Explorer Browser on your PC.

You must also include your BW System in the SAP Logon using group selection.

To call up the line item reports, we have installed note 356166 in the IDES R/3 System.

## Process Flow

To see the data used during this process, choose ? [Page 376].

1. Loading Data into the BW System [Page 377]

   You transfer the data for your project into the Business Information Warehouse System.

   This procedure is required if you are using the existing data of IDES project T-20301.

2. Monitoring the Data Transfer in the Monitor [Page 378]

   When you have started a request to load data, you monitor the status of the transfer.

3. Assigning Reports in the Business Warehouse [Page 379]

   To navigate between the various reports, you link them in the Business Information Warehouse.

4. Evaluating Data in the Business Warehouse [Page 380]

   You evaluate your project data in the Business Explorer Browser. You then call the report *Business Project Overview*.

5. Displaying the Original Documents for the Actual Costs [Page 382]

   From the report *Business Project Overview* you go to your R/3 System, where you display the original documents for the line items.

# Data Used During This Process

| Field | Data | Description |
|---|---|---|
| Project | T-20301 | Project turbine 301 |
| Report | zrkpep000 | Report: Project Line Items - Business Project Overview |
| Controlling area | 1000 | |
| Profile | 1300 | |

# Loading Data Into the BW System

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *BW Administration → Administrator Workbench.* |
| **Transaction Code** | RSA1 |

   The *Administrator Workbench: Modeling* screen appears.

   The screen is split into two parts. On the left side, you see the navigation structure, which we will refer to as the tree structure.

2. On the left side of the screen, choose *InfoSources*.
3. On the right side of the screen, choose .

   You see an overview of the info package groups and their technical names.

4. Expand the node *SAP Project System* → *PS master data*.
5. Right-click on *Project* & *wbs* then choose *Schedule.*
6. On the *Schedule* tab page, choose *Start.*

   When you define InfoPackages, you can determine whether older data records are to be overwritten automatically or whether this needs to be confirmed manually.

   The system may report that the same data have already been loaded into the BW System. In the dialog box, choose *Yes*.

   When you have successfully loaded the data, execute the process step Deleting Old Requests Manually [Ext.].

7. In the dialog box, choose *Immediately,* if required, then choose .

   You return to the Scheduler.

8. To start the request, choose *Start.*

   You can monitor the status of the data transfer in the Monitor [Page 378].

9. Choose .
10. If you receive an express message, choose .
11. Repeat steps 5 to 10 for *Network & activities* and the InfoPackage groups of the subnode *PS transactional data, costs*, *dates*, *earned values* and *line items.*

# Monitoring the Data Transfer in the Monitor

## Use

In the Monitor, you can observe the current status of your request at any time and analyze errors, if required.

Note the icon types listed in front of your request:

- InfoSource (Transaction data)
- InfoObject (Master data)
- InfoObject (Text)
- InfoObject (Hierarchies)

## Procedure

1. To monitor all of the InfoPackage groups in the overview, choose from the right-hand side of the screen.

   The Monitor appears. The traffic light symbol shows whether your request has loaded successfully. If a request has not yet been completed, a yellow traffic light is displayed. If the request contains errors, you see a red traffic light symbol.

2. To display a legend containing the meaning of the other icons, choose .
3. If the loading requests have not yet all been completed, choose *All,* until the yellow traffic light is no longer displayed.
4. If the transfer does not work, you can identify the cause, and correct any errors that may have occurred. Choose Analyzing Errors [Ext.].
5. Choose twice.

# Assigning Reports in the Business Warehouse

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Business Explorer → Query Jump Target* |
| **Transaction Code** | RSBBS |

2. On the *Query* tab page, in the *Sender* field, choose the F4 input help.
3. In the dialog box, choose *Project System* → *Project System - Controlling* → *Commercial Project Overview.*
4. Choose *Open*.

   The technical name is transferred into the field.
5. Choose .
6. In the dialog box in the *Target System* area, enter the following data:

| Field | Data |
|---|---|
| Source system | Select |
| Source system (right field) | R/3 IDES (F4 input help) |

7. Choose .
8. In the dialog box, to add a new receiver report, choose .
9. Double-click on *RT ABAP Report.*
10. Enter the following data:

| Field | Data | Description |
|---|---|---|
| Report | zrkpep000 | Report - Project Line Items |

   To add the report, you must have maintained note 356166 in your system.
11. In the dialog box, choose .
12. Choose .
13. In the row *Reports - Project Line Items*, in the *InfoSource* column, choose the F4 input help.
14. In the dialog box, select *WBS - Elem.: Costs (0CO_OM_WBS_1)*, then choose .
15. Choose .
16. Choose .

# Evaluating Data in the Business Warehouse

## Use

You are the project controller and you evaluate your project data in the Business Explorer Browser. You call up the report *Business Project Overview*.

In your role as the project controller, you can also call up the following reports:

| Report | Values |
|---|---|
| Costs | Business project overview |
| | Project: Actual Costs/Revenues (Line Items) |
| Result | Project Overview |
| Progress | Progress/Costs |

## Prerequisites

You have installed the BW AddOn on your front end and you have included the BW System DPB in your SAP LogOn via group selection.

## Procedure

1. Start the Business Explorer Browser application on your PC.
2. In the SAP LogOn, select your BW System and log on to the system.
3. Choose the role *Project Controller.*
4. Double-click on *Business Project Overview.*
5. To refresh the report data, choose .
6. To include all projects in the overview, enter the following data:

| Field | Data |
|---|---|
| Project definition from | A |
| Project definition to | Z |

If a great number of project definitions exist in your system, we recommend you to further restrict the selection conditions.

7. Choose .
8. To drill down in the list by the characteristic *Project definition*, right. click on the header row *Fiscal Year/ Period Item*, then choose *Replace Fiscal Year/ Period With* → *Project Definition*.
9. To break down your project definition by cost element, right-click on *Project Definition*, then choose *Filter and Drill Down By* → *Cost Element.*

# Displaying the Original Documents for the Actual Costs

## Prerequisites

You are in the Business Explorer Browser and you have drilled down in the business project overview by project definition and cost element.

## Procedure

1. To call up the line item report for the actual costs, right-click on the header row *Costs: Actual*, then choose *Goto* → *Project Line Items.*

   A dialog box appears, in which you can go to an SAP System.

2. Choose *Cancel.*

   The initial screen of your IDES R/3 System appears.

3. Log on to your system.

4. In the dialog box, enter the following data:

| Field | Data | Description |
|---|---|---|
| Controlling area | 1000 | CO Europe |

5. Choose ✔.

6. In the dialog box, enter the following data:

| Field | Data |
|---|---|
| DB Profile | 130000000000 |

7. Choose ✔.

8. In the dialog box, position your cursor on *line Items: Actual Costs*, then choose ✔.

   You see an overview of all single documents.

9. To call up the original document for a line item, position your cursor on a line item, then choose *Document*.

   The system displays the original document.

10. To log off from the system, choose *System* → *Log Off*.

# Invoicing a Project with Down Payment Processing

## Purpose

A customer has placed an order for the construction, delivery and assembly of a passenger elevator. The sales order is completed within a project and the order contains an agreement with the customer that they make a down payment once they have received the layout of the first construction plan. You invoice the customer for the order as the project progresses by sending them two billing documents. The down payment is settled in the first partial invoice.

This process should clarify how a billing plan for a sales order item can be linked to project milestones and down payment processing. The process does not provide a detailed description of the Logistics aspects of the project. See the Make-To-Order Production of Elevators [Page 292] scenario for more details of the Logistics side (for example, assembly processing, variant configuration, material requirements planning, delivery).

You can find more information about this process under [Page 384].

## Process Flow

You can find the data for this process under [Page 386]

1. Prepartory Measures [Page 387]
2. Creating Sales Orders and Projects [Page 388]
3. Releasing a Project [Page 392]
4. Confirming Activity [Page 393]
5. Creating Down Payment Requests [Page 394]
6. Posting Down Payments [Page 396]
7. Confirming Activity [Page 397]
8. Creating Invoices [Page 398]
9. Displaying Line Items [Page 400]
10. Confirming Activity [Page 401]
11. Creating Invoices [Page 402]

# Additional Process Information

The following information applies mainly to IDES users with knowledge of Customizing for SD and the project system. This text uses data from the process to demonstrate how the billing plan in the sales order is linked with the project. Particular attention is paid to how this applies within Customizing. Because this text refers to this IDES demo, you should read it after completing the process chain.

## Assembly Processing with a Network

Material E-1001 used in the process, belongs to planning strategy group 85 (assembly processing network with project). This group contains strategy 85 (assembly processing network with project). This strategy is controlled by requirement type ZMPN (assembly with network/project). Assembly processing with network type PS04 is provided for this requirement type. This setting means that when you create a sales order item for this material, the system automatically creates a network of this category in the project system.

(see SAP Reference IMG: *Production → Production planning → Demand Management → Planned Independent Requirements → Planning Strategy →...*)

## Billing with the Billing Plan

The material belongs to item category group 0008 (PS: Billing plan without configuration). This item category group causes item category TP01 (Network: Billing plan withouth configuration) to be used in the sales document type PS1 (PS: Order) that is used in this process.

(See SAP Reference IMG: *Sales and Distribution → Sales → Sales Documents → Sales Document Item → Assign item categories)*

In item category TP01, billing relevance I (relevant for order-related billing - billing plan) is set. Billing plan type 10 (PS partial billing) has also been assigned to this category. This configuration causes a billing plan of this type to be used for the item in the sales order.

(See SAP Reference IMG: *Sales and Distribution → Billing → Billing plan → Assign billing plan types to item categories)*

## Link between the billing plan and the network

In the sales order item, the item category configuration creates a billing plan with billing plan type 10 (PS: Milestone billing). Three date categories are defined in Customizing for this billing plan type: 01 - Milestone billing, 02: - Final invoice, 03: - Down payment request. Billing rule 1 (percentage milestone billing) is configured for date category 1. Date category 02 works with billing rule 3 (final invoice for milestone billing). This rule ensures that amounts remaining to be billed (possibly arising from price changes after the first partial invoices) are included in a final invoice. Date category 03 uses rule 4 (down payment for percentage milestone billing). This rule triggers down payment processing. Date category 03 refers to the standard billing type FAZ (down payment request) with which the down payment request should be posted.

(See SAP Reference IMG: *Sales and Distribution → Billing → Billing plan → Define and assign date categories → Maintain date category for billing plan type).*

As explained above, a network is also created on the basis of the requirement type for the sales order item. When it does this, the R/3 System uses the standard network E-1001 (with which material E-1001 is linked) as a reference. This standard network belongs to the project system basis data. Milestones are assigned to some of the processes in this standard network. In these

milestones, the indicator “Sales document date” is set. This indicator when used with date key 01 (Date in the billing plan) controls whether the date for a milestone is copied into the billing plan for the sales order. The relevant billing percentage rate is also specified in the milestone, except for in the milestone for the final invoice.

(see application menu: *Logistics* → *Project System* → *Basic Data* → *Templates* → *Network Parameters from Sales Order...).*

The milestones in the standard network E-1001 also indicate the relevant milestone usage. These are the usages PS01, PS03 and PS04. Milestone usage is determined in Customizing.

Milestone usage can refer to a date category for a billing plan type in Sales and Distribution.

There is no date category specified for usage PS01. In this case the R/3 System chooses the default date category from billing plan type 10. This is date category 01 (partial billing). Activity 1150 in the network, linked to a milestone of usage PS01, issues the date and the billing percentage rate for a partial invoice to the billing plan for the sales order. Activity 2000 also contains a milestone for the same purpose. Confirming this activity triggers a second partial invoice.

A reference to date category 03, billing plan type 10 is available for usage PS03. The second milestone in activity 2000 is for usage PS03. This allows the activity to issue the date for the final invoice in the billing plan.

Milestone usage PS04 is linked to date category 04, billing plan type 10. Activity 1000 in the network contains a milestone with this usage. Activity 1000 uses it to issue the date and percentage rate for the down payment request in the billing plan for the sales order.

(See SAP Reference IMG: *Project System* → *Structures* → *Operative Structures* → *Milestones* → *Define milestone usage*)

# Data Used During This Process

| Field | Data | Description |
|---|---|---|
| Sales order type | PS1 | Sales order type for project processing |
| Sales organization | 1000 | Sales organization: Germany |
| Distribution channel | 10 | Distribution channel for end customer |
| Division | 00 | Cross-division |
| Sold-to party | 1600 | Customer |
| Material | E-1001 | Elevator |
| Company code | 1000 | IDES Germany |
| Account | 113100 | Bank account |

# Preparations

The descriptions of objects in the Project System do not exist in multiple languages. For this reason, you should now execute a one-time Automatic Translation [Page 15] into the language you require.

# Creating Sales Orders and Projects

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistic → Sales and Distribution → Sales → Order → Create* |
| **Transaction Code** | VA01 |

2. Enter the following data:

| Field | Data |
|---|---|
| Order type | PS1 |
| Sales organization | 1000 |
| Distribution channel | 10 |
| Division | 00 |

3. Choose .

4. Enter the following data:

| Field | Data |
|---|---|
| Sold-to party | 1600 |
| Purch.order no. | TA-450931 |
| PO date | Current date |
| Requested delivery date | Accept proposed date |
| Material | E-1001 |
| Order quantity | 1 |

5. Choose .

   In case you are asked to enter a business area, enter *1000* and choose .

   The system informs you that it has read and scheduled the network.

   The elevator ordered by the customer will be manufactured in a project and material E-1001 is linked to a standard network. The network created in the sales order is copied from the standard network. The network determines the progress of the project, in other words, the chronological sequence of the individual project steps.

   You reach the *PS: order: Availability Control* screen.

   The network scheduling determines a final date for the project and in the Availability Control screen, the system informs you that, in accordance with current planning, the order item cannot be confirmed until this date.

6. Choose *Complete dlv.*

7. Select the item and choose *Goto* → *Item* → *Billing plan*.

   The customer will be invoiced for the sales order item with a billing plan. The total value of the item is billed in two partial invoices as the project progresses. The final invoice is for any amount outstanding after both partial invoices have been paid. You have also agreed with the customer that they pay 10 per cent of the total value as a down payment. The planned billing dates have been taken from the network that was created in the background for the sales order item. All dates have been blocked for billing (*Block* field) because the actual dates have not yet been confirmed. The block is removed once the milestones assigned to these dates in the network have been confirmed as completed.

8. Choose the *Schedule lines* tab page.
9. Select the second schedule line and choose .
10. Choose the *Procurement* tab page.

    In the *Assembly* section, the system displays the sequential number of the network that was created when you created the order item. When you save this sales order, this number is replaced by a final network number.

11. In the *Assembly* section, choose *Header.*

    You reach the *Network Create: Header Data* screen.

    In order to explain how the billing plan is linked to the project, we will now branch into the network although this is not necessary for actually creating the order. The project is created automatically when you save the sales order.

12. Choose .
13. On the *Create Network: Basic Data Overview (Basic Dates)* screen, choose the *Int.processing* tab page.

    The system lists all the activities that have to be implemented during the internal processing of the project.

14. Choose .
15. Choose .

    The system branches to the *Create: Network: Milestone Overview* screen for activity 1000, which represents the project phase up until when the customer accepts the construction layout.

    Milestones are assigned to an activity and are used within the project to control when certain phases in the process have been achieved.

16. Select the milestone line and choose .

    The system branches to the *Milestone detail data* screen.

    In the *Basic data* tab page in the *Usage* section, you can see that the *Sales document date* indicator has been activated. This indicator specifies that the scheduled date for the activity is to be copied into the billing plan for the sales order. The *InvoicePercentg* field

displays the percentage amount in the invoice or required for a down payment for the date. The milestone is linked to the down payment date in the billing plan.

17. Choose .
18. On the *Create: Network: Milestone Overview* screen, choose  several times until you reach the display for activity 1150, which controls the project's earned value. (The activity number is displayed in the *Activity* field.)
19. Select the milestone line and choose .

    Activity 1150 is also linked to a milestone and when this milestone is confirmed, the partial invoice releases 30 per cent of the total value.
20. Choose .
21. Choose  several times, until the system informs you that it has reached the last activity.
22. Choose .
23. Choose the *Ext. processing* tab page.

    The system lists an activity called *Certification & Release to Customer*, which is implemented by another company.
24. Select activity 2000 and choose .

    This activity is linked to two milestones.
25. Select both milestone lines and choose .

    When the first milestone is confirmed, the second partial invoice for the billing plan is released, which bills the customer for the remaining 70 per cent of the total order value.
26. Choose .

    When the second milestone *Final bill - correction* is confirmed, the system removes the billing block for a final invoice. The final invoice can contain any remaining amounts that still need to be paid. This might be necessary, for example, if you agree to increase the price during the project after partial invoices, based on the old price, have already been created.
27. Choose .
28. Choose .
29. On the *Create PS: order: Schedule Line Data* screen, choose .

    To confirm possible warning messages choose .

    The system informs you that it has generated the project and issues you with a sales order number.
30. Make a note of the sales order number.
31. Choose  until the overview tree appears.

    In the *Exit order Processing* dialog box choose *No*.

# Releasing a Project

## Use

In order to carry out the activities in a project, you have to release the it. Follow this step to release your project.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Project Builder* |
| **Transaction Code** | CJ20N |

   In case you open the *project builder* for the first time, choose ✔ twice.

2. Choose .
3. Enter the following data:

| Field | Data |
|---|---|
| Project definition | E- + (sales order number noted earlier); Example: E-5423 |

4. Choose ✔.
5. Select *Elevator modell 1001* in the left-hand corner.
6. Choose *Edit* → *Status* → *Release*.

   The status in the field *System status* will be set to *REL* (Released).

7. Choose .
8. Choose .

# Confirming Activity

## Use

Once you have created the layout and it has been accepted by the customer, you can confirm the relevant activity in the project.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Project Builder* |
| **Transaction Code** | CJ20N |

2. Choose .
3. Enter the following data:

| Field | Data |
|---|---|
| Project def. | E- + (sales order number noted earlier); Example: E-5423 |

4. Choose .
5. Select *Elevator modell 1001* in the left-hand corner.
6. Choose .
7. Select the activity *Layout & acceptance from customer*.
8. Choose *Edit* → *Activity* → *Confirm.*

   In the dialog box you see the actual data of the customer activitiy 1000 *Layout & acceptance.* The indicator *FinalConfirm* is selected.
9. Choose .

   The status in the field *System status* will be set to *CNF* (Confirmded).
10. Wählen Sie .
11. Wählen Sie .

# Creating Down Payment Requests

## Use

When you confirm activity 1000, the system removes the billing block for the first date in the billing plan, because the prerequisites for the down payment request have been fulfilled. Create the down payment request in this step.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales And Distribution* → *Billing* → *Billing Document* → *Process Billing Due List* |
| **Transaction Code** | VF04 |

2. Enter the following data:

| Field | Data |
|---|---|
| Billing date from | Current date |
| Billing date to | Current date |
| SD document | Sales order number noted earlier |
| Sales organization | 1000 |
| Documents to be selected - Order-releated | Select |
| Documents to be selected - Delivery-releated | Deselect |

3. Choose *DisplayBillList*.

   The sales order is displayed on the *Process Billing Due List* screen.

4. Select the entry in the worklist and choose *Environment* → *Display Document*.

5. Select item 10 and choose *Goto* → *Item* → *Billing Plan*.

   You can see that the down payment date is no longer blocked for billing. The billing date is the confirmation date of the assigned project activity so the order is in today's billing worklist.

6. Choose .

7. On the *Display PS: order...: Overview* screen, choose  again.

8. Choose .

   The system displays that a billing document has been created.

9. Position your cursor on the line containing your group number and choose *Documents*.

10. Place the cursor on the sales document and choose *Disp. doc.*

11. Select the item and choose *Goto* → *Item* → *Item Conditions*.

    In the line *Calculated Costs*, you can see that the final amount is 10 per cent of the sales order value plus output tax.

12. In the column *Condition Value,* note the value of *Calculated Coststst*.
13. Choose .
14. Choose *Accounting*.

    You reach the *Display Document: Overview* screen where the most important data for the document created in Financial Accounting is displayed.

    The document generated in Financial Accounting does not have any affect on accounting and does not update the transaction figures. However, it is used as a noted item to remind the Accounting department that a down payment has to be made, and serves as a posting template for the down payment or as a document for the dunning program. A document item is entered in the receivables account for the down payment request without creating an offsetting entry.

15. Choose until the overview tree appears.

# Posting Down Payments

## Use

On receipt of the down payment request, the customer transfers the required amount to your company. In this step, you enter the down payment using the down payment request as a reference. The R/3 System then automatically sets the down payment as cleared.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Financial Accounting* → *Accounts Receivable* → *Document Entry* → *Down Payment* → *Down Payment* |
| **Transaction Code** | F-29 |

2. Enter the following data:

| Field | Data |
|---|---|
| Document date | Current date |
| Company code | 1000 (is proposed) |
| Currency | EUR |
| Account (in the *Customer* section) | 1600 |
| Special G/L ind. | A (down payment) |
| Account (in the *Bank* section) | 113100 |
| Amount | Amount noted earlier |

3. Choose *Requests*.

   Because you are not permitted to balance down payments with receivables and liabilities from the delivery, the down payment is treated as a special G/L transaction both in G/L accounting and in accounts receivables accounting. Special G/L transactions are those that have to be processed separately.

4. Select the down payment request you want to process and choose *Create down payments*.
5. On the *Post Customer Down Payment: Display Overview* screen, choose .
6. Choose until the overview tree appears, confirming the *Exit Editing* dialog box with *Yes*.

# Confirming Activity

## Use

Because this script deals mainly with the billing aspect of a project, you now confirm the activity that leads to the first partial invoice.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Project System → Progress → Confirmation → Individual Confirmation → Enter* |
| **Transaction Code** | CN25 |

   You reach the *Create Network Confirmation: Initial Screen*.

2. Enter the following data:

| Field | Data |
|---|---|
| Network | Network number proposed by the R/3 System |

   If the R/3 System does not propose a network number, you can search for it with a matchcode.Choose the *Networks by Sales Order.* Enter the sales order number you entered earlier and choose ✔.

3. Choose .

4. On the *Create Network Confirmation: Activity Overview* screen, choose *1150 (Update control)* and choose *Actual data*.

   On the *Create Network Confirmation: Actual data* dialog box, the R/3 System proposes values which you can accept.

5. Choose .

   On the *Create Network Confirmation: Initial Screen*, the R/3 System informs you that the confirmation has been saved.

6. Choose until the overview tree appears.

# Creating Invoices

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales And Distribution* → *Billing* → *Billing Document* → *Process Billing Due List* |
| **Transaction Code** | VF04 |

2. Enter the following data:

| Field | Data |
|---|---|
| Billing date from | Current date |
| Billing date to | Current date |
| SD document | Sales order number noted earlier |
| Sales organization | 1000 |
| Order-related (in the *Documents to be selected* section) | Select |

3. Choose *DisplayBillList*.
4. On the *Process Billing Due List* screen, select the entry in the worklist and choose *Environment* → *Display document*.

   You reach the *PS: Display order...: Overview screen*.
5. Select item 10 and select *Goto* → *Item* → *Billing plan*.

   The R/3 System branches to the *Display PS: order...Item Data* screen.

   You can see that the first invoice date is no longer blocked for billing. The billing date is the confirmation date of the assigned project activity so the order is in the billing due list.
6. Choose .
7. On the *PS: Display order....: Overview* screen, choose again.

   You eventually reach the *Process Billing Due List* screen.
8. Select the entry in the billing due list and choose *Individual billing document*.

   This takes you to the *Invoice Create...(F2): Overview of Billing Items* screen.

   The billing document contains two items: The first item invoices the customer for 30 per cent of the total order value. The second item displays the down payment amount that has to be off-set.
9. Select the second item and choose *Pricing*.

   If you did not want the total down payment amount to be offset with the first partial invoice, you could change the pricing amount for condition type AZWR (down payment/offsetting) here in the *Pricing* screen for the *Offset Item*. In this case the offset amount that is now open will appear for offsetting in the next partial invoice.

10. Choose .
11. On the *Invoice ... (F2) Create: Overview of Billing Items* screen, choose .
12. The *Process Billing Due List* screen issues the billing document number in a message. Note this number.
13. Choose .
14. Choose until the overview tree appears.

# Displaying Single Line Items

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Accounting* → *Financial Accounting* → *Accounts Receivable* → *Account* → *Display/Change Line Items* |
| **Transaction Code** | FBL5N |

2. Enter the following data:

| Field | Data |
|---|---|
| Customer | 1600 |
| Company code | 1000 |
| Open items | Select |

3. Choose .
4. On the left side of the screen, in the *Documents* folder, select *Reference*.
5. Choose *Adopt Selected Items*.
6. Enter the following values in the *Selection Criteria: Values* dialog box:

| Field | Data |
|---|---|
| Reference (from) | Billing document noted earlier with two leading zeros (for example, 0090005702) |

7. Choose .
8. Choose .

   You reach the *Display Customer Line Item: Basic List* screen.
9. Choose until the overview tree appears.

# Confirming Activity

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Progress* → *Confirmation* → *Individual Confirmation* → *Enter* |
| **Transaction Code** | CN25 |

   You reach the *Create Network Confirmation: Initial Screen*.

2. Enter the following data:

| Field | Data |
|---|---|
| Network | Network number proposed by the R/3 System |
| Activity | 2000 |

3. Choose .

   The R/3 System branches to the *Create Network Confirmation: Actual data* screen.

4. Enter a duration of 3 days.

5. Choose .

   On the *Create Network Confirmation: Initial Screen*, the R/3 System informs you that the confirmation has been saved.

6. Choose until the overview tree appears.

# Creating Invoices

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Sales And Distribution* → *Billing* → *Billing Document* → *Process Billing Due List* |
| **Transaction Code** | VF04 |

2. Enter the following data:

| Field | Data |
|---|---|
| Billing date from | Current date |
| Billing date to | Current date |
| SD document | Sales order number noted earlier |
| Sales organization | 1000 |
| Order-related (in the *Documents to be selected* section) | Select |

3. Choose *DisplayBillList*.
4. On the *Process Billing Due List* screen, select the entry in the worklist and choose *Environment* → *Display document*.

   You reach the *PS: Display order...: Overview screen*.
5. Select item 10 and select *Goto* → *Item* → *Billing plan*.

   You reach the *Display PS: Order...Item Data* screen.

   You can see that the date for the second partial invoice for the remaining 70 per cent as well as the date for the final invoice are no longer blocked for billing. No prices have been increased during the project run time so the date for the final invoice does not contain any values to be billed.
6. Choose .
7. On the *Display PS Order: Overview* screen, choose .
8. Choose .
9. Choose  until the overview tree appears.

# Engineer-to-Order with Planning of Production Lots (SEIBAN)

## Purpose

This process describes the manufacture of an NC machine. The stocks of this product are recorded separately in the project stock for each Production Lot. The system generates a WBS element for the production lot. You maintain the master data, execute planning, production, and determine the costs with reference to this WBS element.

You can find more information about this process under [Page 405].

## Process Flow

You can find the data for this process under [Page 406].

1. Displaying a Change Number [Page 407]
2. Displaying the Material BOM [Page 408]
3. Creating a Production Lot [Page 409]
4. Creating a Planned Independent Requirement [Page 410]
5. Changing the Planned Independent Requirement [Page 412]
6. Creating a Cost Estimate for the Production Lot [Page 413]
7. Activating the Cost Estimate for the Production Lot [Page 414]
8. Executing MRP for the Production Lot [Page 415]
9. Creating a Sales Order [Page 416]
10. Assigning the Production Lot to the Network Reservation [Page 419]
11. Releasing the Project Definition [Page 418]
12. Processing Planned Orders and Production Orders [Page 420]
13. Assigning the Finished Product [Page 422]

# Additional Process Information

The continuous need to upgrade products and reduce costs, means that in industries such as mechanical engineering and electronics, the production lots of finished products and semi-finished goods need to be planned and produced using different BOMs and routings. Production lots vary due to the use of alternative components or manufacturing processes. You would then need to determine costs for each production lot. For example, you might want to determined the planned and actual costs incurred by a production lot of an assembly before you receive the of the sales order.

To achieve this, you define a production lot for a particular assembly. When you create the production lot, the system automatically creates a corresponding WBS element, which serves as the number of the production lot. To create an individual BOM for each production lot, use the WBS BOM that you create with reference to the production lot (WBS element). You can also create a routing with reference to the production lot.

The planning, production and cost evaluation are carried out with reference to the number of the production lot. This enables you to evaluate the costs of the different production lots and compare them in the planning stage (before receipt of the sales order).

This type of planning is known as Pre-Planned Seiban in Japan.

# Data Used During This Process

| Field | Data |
|---|---|
| Plant | 5000 |
| Material | NC-101-001<br>NC-101 |
| BOM | NC-101 |
| Order Type | OR |
| Sales organization | 5000 |
| Distribution channel | 10 |
| Division | 00 |
| Sold-to party | 5500 |

# Displaying a Change Number

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Production* → *Master Data* → *Engineering Change Management* → *Change Number* → *Display* |
| **Transaction Code** | CC03 |

2. Enter the following data:

| Field | Data |
|---|---|
| Change number | NC-101-00001 |

3. Choose .

   You can see that effectivity type SERNR is used.

4. Choose *Effectiv*.

5. The system displays the following effectivity types:

| Field | Data |
|---|---|
| Material | NC-101 |
| Serial number No low | 60 |
| Serial number No high | Empty |
| Indicator | X |

6. Choose until the overview tree appears.

# Displaying the Material BOM

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Master Data* node, choose *Bills of Material* → *Bill of Material* → *Material BOM* → *Display* |
| **Transaction Code** | CS03 |

2. On the *Display Material BOM: Initial Screen*, enter the following data:

| Field | Data |
|---|---|
| Material | NC-101 |
| Plant | 5000 |
| Use | 1 |
| Change number | NC-101-00001 |

3. Choose .

   On the *Display Material BOM: General Item Overview* screen, you see that an old material NC-100-104 has been replaced by a new material NC-100-105 with the change number NC-101-00001.

4. Choose until the overview tree appears.

# Creating a Production Lot

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *MRP* node, choose *Master Data* → *Production Lot* → *Create* |
| **Transaction Code** | MDL1 |

2. Enter the following data:

| Field | Data |
|---|---|
| Production lot | S-####-NC-101 (# = any number) |
| Prod.lot prof. | 5001 |

3. Choose .
4. Enter the following data:

| Field | Data |
|---|---|
| Description | S-####-NC-101 |
| Material | NC-101 |

5. Choose .
6. Choose until the overview tree appears.

# Creating a Planned Independent Requirement

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Production* node, choose *Production Planning* → *Demand Management* → *Planned Independent Requirements* → *Create* |
| **Transaction Code** | MD61, MD62 |

2. On the *Create Planned Independent Requirements: Initial Screen* choose *Reqmts parameters...*
3. In the *Settings: Requirements Parameters* dialog box, enter the following data:

| Field | Data |
|---|---|
| Plant | 5000 |
| MRP area | 5000 |
| Requirements type | VSFB |
| Version | 00 |
| Period ind. | D |
| Period split | Select |
| Original qty ind. | Do not select |
| Active | Select |
| Item screen | Select |
| Consumption ind. | 3 |
| Reference | Empty |
| History indicator | Select |

4. Choose twice.
5. On the *Create Planned Independent Requirements: Initial Screen*, enter the following data:

| Field | Data |
|---|---|
| Req. plan number | Select |
| Req. plan number | S####NC101 |
| MRP area | 5000 |
| Plant | 5000 |
| Version | 00 |
| From | Today's date |
| To | One year in the future |
| Planning period | D |

6. Choose .

7. If a warning message appears, choose .
8. On the *Planned Independent Requirements: Overview Screen*, enter the following data:

| Field | Data |
|---|---|
| Material | NC-101 |
| MRP area | 5000 |
| RqType | VSFB |
| CL | 3 |

9. Choose .
10. Select the line, then choose the *Sched. lines* tab page.
11. On the *Plnd ind. reqmts Create: Schedule Lines* screen, enter the following data:

| Field | Data |
|---|---|
| (P) Period indicator | M |
| Reqmts dt. | (MM.YYYY) for the next month |
| Planned qty | 100 |
| Splt | D |

12. To display the additional data, choose .
13. In the dialog box, enter the following data:

| Field | Data |
|---|---|
| Account assignment category | Q |

14. Choose .
15. In the *Account Assignment Data* dialog box, enter the following data:

| Field | Data |
|---|---|
| WBS element | S-####-NC-101 |

16. Choose twice.
17. Choose .
18. Remain on this screen.

# Changing the Planned Independent Requirement

1. On the *Create Planned Independent Requirements: Initial Screen*, choose *Planned indep. reqmts* → *Change*.
2. On the *Change Planned Independent Requirements: Initial Screen*, enter the following data:

| Field | Data |
|---|---|
| Req. plan number | Select |
| Req. plan number | S####NC101 |
| MRP area | 5000 |
| Plant | 5000 |
| Requirements type | VSFB |
| Selected version | Select |
| Selected version | 00 |

3. Choose .
4. Select the line that you entered, then choose the *Sched. lines* tab page.
5. Select the first item, then choose .
6. In the dialog box, enter the following data:

| Field | Data |
|---|---|
| Material | NC-101 |
| Serial number | 60 |

7. Choose .
8. Choose .
9. Choose until the overview tree appears.

# Creating a Cost Estimate for the Production Lot

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Product Cost Planning* node, choose *Material Costing* → *Production Lot Cost Estimate* → *Create* |
| **Transaction Code** | CKW1, CKW4 |

2. Enter the following data:

| Field | Data |
|---|---|
| Costing variant | PPC5 |
| WBS element | S-#####-NC-101 |
| Material | NC-101 |
| Plant | 5000 |
| Costing lot size | 1 |
| Costing version | 1 |

3. Choose .
4. In the *Assign Values to Effectivity Parameters* dialog box, enter the following data:

| Field | Data |
|---|---|
| Material | NC-101 |
| Serial number | 60 |

5. Choose .
6. In the *Costing Dates* dialog box, enter the following data:

| Field | Data |
|---|---|
| Qty structure date | Today's date |
| Valuation date | Today's date |

7. Choose .
8. Choose .

   In the hierarchy, you see that material NC-100-105 is used instead of NC-100-104.

9. Choose .
10. Choose .
11. In the *Update parameters* dialog box, choose .
12. Remain on this screen.

# Activating the Cost Estimate for the Production Lot

1. On the *Create Cost Estimate for Production Lot: Initial Screen*, choose *Production lot cost estimate* → *Activate*.
2. On the *Activate Cost Estimate for Production Lot* screen, enter the following data:

| Field | Data |
|---|---|
| Costing variant | PPC5 |
| WBS element | S-####-NC-101 |
| Material | NC-101 |
| Plant | 5000 |

3. Choose .
4. In the *Confirmation* dialog box, choose *Yes*.
5. To confirm the information message, choose .

# Executing MRP for the Production Lot

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Production* node, choose *MRP* → *Planning* → *Single-Item, Project* |
| **Transaction Code** | MD51 |

2. Enter the following data:

| **Field** | **Data** |
|---|---|
| Project def. | S-####-NC-101 |
| With hierarchy | Do not select |
| Create purchase req. | 1 |
| Planning mode | 3 |
| Delivery Schedules | 3 |
| Scheduling | 1 |
| Also plan unchanged components | Select |
| Display results before they are saved | Do not select |
| Display material list | Select |

3. Choose twice.
4. Choose and until you the overview tree appears.

# Creating a Sales Order

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Sales and Distribution → Sales → Order → Create* |
| **Transaction Code** | VA01 |

2. On the *Create Sales Order: Initial Screen*, enter the following data:

| Field | Data |
|---|---|
| Order Type | OR |
| Sales organization | 5000 |
| Distribution channel | 10 |
| Division | 00 |

3. Choose .
4. On the *Create Standard Order: Overview* screen, enter the following data:

| Field | Data |
|---|---|
| Sold-to party | 5500 |
| Purchase Order no. | 1 |
| Req.deliv.date | Date in two months |
| Material | NC-101-001 |
| Order quantity | 1 |

5. Choose twice.
6. If the *Availability Control* screen appears, choose *Continue*.
7. Choose .

   In the background, the system generates a project definition, a WBS element and a network, based on the standard WBS and the network. Make a note of the order number.
8. Choose and *No*.
9. On the *Create Standard Order: Initial Screen*, choose *Sales document → Display*.
10. Enter the following data:

| Field | Data |
|---|---|
| Order | Your order number |

11. Choose .
12. On the Item overview tab page, select item 10, then choose *Goto → Item → Account assignment*.
13. Note the number of the WBS element.
14. On the *Display Standard Order: Item Data* screen, choose the *Schedule lines* tab page.

15. Select the first item, then choose *Procurement*.
16. Make a note of the network number
17. Choose until the overview tree appears.

# Releasing the Project Definition

1. Open the *Last projects processed node* in the Worklist area. You can find your project listed under this node. Double click on your project.

   Detailed data for your project is displayed in the right side of the screen.

2. Select *Edit* → *Status* → *Release*. The System Status field value has changed from CRTD to REL.

3. Choose .

4. Choose until the overview tree appears.

# Assigning the Production Lot to the Network Reservation

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Project System* → *Project* → *Project Builder* |
| **Transaction Code** | CJ20N |

When you first call up the Project Builder, a dialog box appears that describes the user-specific settings you can choose to make. To maintain the user-specific settings, choose .

The Project Builder: User-Specific Options dialog box appears. In addition to the general settings, you can also define, for example, which project objects you would like to use as templates, for example, standard templates. Choose .

2. Choose in the *Project Structure area* and enter the following data:

| Field | Data |
|---|---|
| Project def. | Your WBS number |

3. Choose .

The *Project Builder screen* appears.

4. Place the cursor on *NC machinery standard WBS* line. Then choose .
5. Choose *NC machinery series 101* to see detailed information for this component in the right side of the screen.
6. Choose the *Proc.parm tab page.*
7. Enter (overwrite) the following data:

| Field | Data |
|---|---|
| WBS element | Your WBS number |

Choose twice.

8. Choose .
9. Remain on this screen.

# Processing the Planned Orders and Production Orders

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Production Control* node, choose *Order* → *Create* → *Collective Conversion of Planned Orders* |
| **Transaction Code** | CO41 |

2. Enter the following data:

| Field | Data |
|---|---|
| Planning Plant | 5000 |
| WBS element | S-####-NC-101 |
| Order Type | PP01 |

Make sure that all other fields are empty.

3. Choose .
4. Choose .
5. Choose *Convert*.

The planned orders have now been converted into production orders.

6. Choose until the overview tree appears.
7. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Production Control* node, choose *Control* → *Collective Release* |
| **Transaction Code** | CO05N |

8. On the *Release Production Orders: Initial Screen*, enter the following data:

| Field | Data |
|---|---|
| WBS element | S-####-NC-101 |

Leave all other fields empty.

9. Choose the *Mass processing- Release* tab page.
10. Select the following data:

| Field | Data |
|---|---|
| Release control order | Order release |

11. Choose .
12. Make a note of the first production order number for material NC-101( You can see the material code for the order by choosing the order and clicking on ).
13. Select all orders. To do so, choose the first line. Scroll down the screen and choose the last line pressing the Shift Key.
14. Choose .

15. Choose until the overview tree appears.

# Assigning the Finished Product

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Receipt* → *For Order* |
| **Transaction Code** | MB31 |

2. On the *Goods Receipt for Order: Initial Screen*, enter the following data:

| Field | Data |
|---|---|
| Movement type | 101 |
| Order | Production order number |
| Plant | 5000 |
| Storage location | 5002 |

3. Choose *Adopt + Details*.
4. On the *Goods Receipt for Order: New Item 0001* screen, choose and confirm any warning messages that may appear.
5. Choose .
6. Choose .
7. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Inventory Management* node, choose *Goods Movement* → *Goods Issue* |
| **Transaction Code** | MB1A |

8. Choose *Goods issue* → *Create w. reference* → *To reservation.*
9. Enter the following data:

| Field | Data |
|---|---|
| Network | Network number |

   Leave all other fields empty.

10. Choose .
11. On the *Reservations list* screen, select material NC-101, then choose *Adopt*.
12. On the *Enter Goods Issue: Selection Screen*, enter storage location 5002, then choose *Adopt*.
13. On the *Enter Goods Issue: Overview* screen, choose .
14. Choose until the overview tree appears.

# Production Lot

A production lot is a specified production quantity of an assembly (finished product or semi-finished product) that is planned and manufactured with reference to a number. You use this number to determine the costs for the production of a production lot.

The number of the production lot is a WBS element that the system generates when you create the number.

# Make-To-Order Production With Planning of Production Lots (SEIBAN)

This process demonstrates WBS BOM maintenance, subcontracting processing and a sales order allocation to the production lot.

The first step is to create a sales order of quantity 1 for NC machine with the production lot. BOM is maintained for each production lot using WBS BOM so that customer specifications can be reflected.

After MRP is carried out for the production lot, manufacturing and subcontracting are processed. MRP area for subcontracting is determined and designated in the material master of the components so that dependent requirements are exploded onto subcontracting segment.

Then a sales order, which the production lot is allocated to, is taken. After production order for the final assembly is completed and goods are received into project stock, it is delivered to the sales order.

You can find more information about this process under [Page 425].

## Process Flow

You can find the data for this process under [Page 426].

1. Creating a Production Lot [Page 427]
2. Setting the Prerequisites for this Scenario [Page 428]
3. Creating Planned Order for Each Final Product [Page 429]
4. Maintaining the WBS BOM [Page 430]
5. Executing MRP for the Production Lot [Page 431]
6. Converting a Purchase Requistion into a Purchase Order [Page 432]
7. Issuing Components [Page 433]
8. Good Receipt for the Purchase Order [Page 434]
9. Converting the Planned Order into a Production Order [Page 435]
10. Goods Receipt for the Production Order [Page 436]
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# Additional Process Information

The continuous need to upgrade products and reduce costs, means that in industries such as mechanical engineering and electronics, the production lots of finished products and semi-finished goods need to be planned and produced using different BOMs and routings. Production lots vary due to the use of alternative components or manufacturing processes. You would then need to determine costs for each production lot. For example, you might want to determined the planned and actual costs incurred by a production lot of an assembly before you receive the of the sales order.

To achieve this, you define a production lot for a particular assembly. Starting from the MRP menu, choose *Master data* → *Production lot* → *Create*. When you create the production lot, the system automatically creates a corresponding WBS element, which serves as the number of the production lot. To create an individual BOM for each production lot, use the WBS BOM that you create with reference to the production lot (WBS element). You can also create a routing with reference to the production lot.

The planning, production and cost evaluation are carried out with reference to the number of the production lot. This enables you to evaluate the costs of the different production lots and compare them in the planning stage (before receipt of the sales order).

This type of planning is known as Pre-Planned Seiban in Japan.

Up to now, separate planning and cost evaluation have only been possible for make-to-order and engineer-to-order production, that is, after receipt of the definite customer requirements. It is for this reason that production lot planning is being introduced with Release 4.5. To execute production lot planning, you need to make various settings in Customizing. You can see an overview of the IMG activities in Customizing for Production in Production Lot Planning. If you have chosen text display with SAPscript, you can jump directly from this text to the various IMG activities and make the settings. If you choose text display with SAPscript, you can jump directly from this text to the various IMG activities and make the settings.

For more information about production lot planning, see the R/3 library documentation in PP Production Lot Planning.

# Data Used During This Process

| Field | Data |
|---|---|
| Plant | 5000,5100 |
| Material | NC-103 |
| BOM | NC-103 |
| Order Type | OR |
| Sales organization | 5000 |
| Distribution channel | 10 |
| Division | 00 |
| Sold-to party | 5500 |

# Creating a Production Lot

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Production* → *MRP* → *Master Data* → *Production Lot* → *Create* |
| **Transaction Code** | MDL1 |

2. Enter the following data:

| Field | Data |
|---|---|
| Production lot | S-####-NC-103 |
| Prod.lot prof. | 5001 |

3. Choose .
4. Enter the following data:

| Field | Data |
|---|---|
| Description | S-####-NC-103 |
| Material | NC-103 |

5. Choose .

   The system informs you that production lot S-####-NC-103 has been created.

6. Choose until the overview tree appears.

# Setting the Prerequsites for this Scenario

## Use

You now start a CATT to set the requirements for this IDES process. This CATT run create the planned independent requirements for your production lot and updates the stocks of the individual materials to the levels required for this scenario.

## Procedure

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Tools* → *ABAP Workbench* → *Test* → *Test Workbench* → *CATT* |
| **Transaction Code** | SCEM |

2. On the *CATT: Initial screen*, enter the following data:

| Field | Data |
|---|---|
| Test case | ZIDES_SEIBANMTO |

3. Choose .

   The *CATT - Run Test Case ZIDES_SEIBANMTO screen* appears.

4. Select *Backgr. process*.
5. Choose .
6. Choose .

   In the status bar, you can see which transactions are being processed.

7. Choose until the overview tree appears.

# Creating a Planned Order for Each Final Product

7. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Production* → *MRP* → *Planned Order* → *Create* |
| **Transaction Code** | MD11 |

8. Enter the following data:

| Field | Data |
|---|---|
| Planned order profile | PR ( Project Order ) |

9. Choose .

10. On the *Create Planned Order : Initial screen*, enter the following data:

| Field | Data |
|---|---|
| Material | NC-103 |
| MRP area | 5000 |
| Order quantity | 1 |
| Ord.finish | One month in the future |

11. Choose .

12. On the *Assgmt tab page*, enter the following data:

| Field | Data |
|---|---|
| WBS element | S-####-NC-103 |

13. Choose .

14. Choose until the overview tree appears.

# Maintaining the WBS BOM

15. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Production → Master data → Bills of material → Bill of material → WBS BOM → Multi-level → Create* |
| **Transaction Code** | CS74 |

16. Enter the following data:

| Field | Data |
|---|---|
| WBS element | S-####-NC-103 |
| Material | NC-103 |
| Plant | 5000 |
| Alternative | 1 |
| BOM application | PP01 |
| Change number | Blank |
| Valid from | Today |

17. Choose .
18. On the *Create WBS BOM (Structure) screen*, choose *Multi-level <-> single-level* .
19. Position the cursor on a material NC-103-103 and choose *Child.*
20. On the *Create WBS BOM: General Item Overview screen*, enter the following data:

| Field | Data |
|---|---|
| Item | 0040 |
| ICt (Item Category) | L |
| Component | NC-103-234 |
| Quantity | 1 |

21. Choose .
22. Choose . You see the newly added component on the multi-level BOM under NC-103-103.
23. Choose .
24. Choose until the overview tree appears.

# Executing MRP for the Production Lot

5. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Production* node, choose *MRP* → *Planning* → *Single-Item, Project* |
| **Transaction Code** | MD51 |

6. Enter the following data:

| Field | Data |
|---|---|
| Project def. | S-####-NC-103 |
| With hierarchy | Do not select |
| Create purchase req. | 1 |
| Planning mode | 3 |
| Delivery Schedules | 3 |
| Scheduling | 1 |
| Also plan unchanged components | Select |
| Display results before they are saved | Do not select |
| Display material list | Select |

7. Choose twice.

8. On the *Project Planning – Multi-level screen*, choose *Materials*.

   You see that NC-103-234 is included in the MRP execution. It means that the WBS BOM is taken into account.

9. Select material NC-103-101 and choose *Selected results*.

   On the *Planning Result: Individual Lines screen*, you see that MRP element of NC-103-101 is pegged to WBS element S-####-NC-103.

10. Choose and until you the overview tree appears.

# Converting a Purchase Requisition into a Purchase Order

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vender / Supplying Plant known* |
| **Transaction Code** | ME21N |

   The Create Purchase Order screen appears. On the left side of the screen, the system displays accompanying documentation.

2. To hide this documentation, choose .

3. Enter the following data:

| Field | Data |
|---|---|
| ( Field ) | Standard PO |
| Vender | 5700 |
| Doc. date | Today |

4. If the Document overview is off, choose *Document Overview On*. ( The button changes to *Document Overview Off* )

5. Choose the pull down of and select purchase requisitions.

6. On the *Purchase requisitions screen*, enter the following data:

| Field | Data |
|---|---|
| Account assignment category | Q |
| Plant | 5100 |
| Material | NC-103-211 |
| Purchasing group | 500 |

   Other fields are left blank.

7. Choose .

8. Place the cursor on the selected purchase requisition and choose .

9. Choose .

   Standard purchase order is created. Note this purchase order number.

10. Choose until the overview tree appears.

# Issuing Components

25. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Material Management* → *Purchasing* → *Purchase order* → *Reporting* → *SC Stocks perVender* |
| **Transaction Code** | ME2O |

26. Enter the following data:

| Field | Data |
|---|---|
| Vender | 5700 |
| Assembly | NC-103-211 |
| Plant | 5100 |
| With reqts. from SC requisns. | Select |
| W. ext. receipts fr. Requisns. | Select |
| Only SC stocks with shortage | Select |

27. Choose .

28. On the *SC Stock Monitoring for Vender screen*, choose .

29. Choose *Post goods issue*.

30. On the *Post Goods Issue dialog box*, enter the following data.

| Field | Data |
|---|---|
| Stpr. Location | 5101 |
| Batch | Blank |
| Quantity | 1 |

31. Choose twice.

    The system issues a message that goods transfer is created.

32. Choose

33. Choose until the overview tree appears.

# Goods Receipt for the Purchase Order

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Receipt* → *For Purchase Order* → *PO Number Known* |
| **Transaction Code** | MIGO |

2. Enter the following data:

| Field | Data |
|---|---|
| Purchase order | Number of your purchase order |
| Document date | Today's date |
| Posting date | Today's date |

3. Choose .

   The goods receipt for the purchase order is copied into the item overview.

4. You can close the detailed data area at the bottom of the screen by choosing .
5. In the item data area (at the middle of the screen), select *OK* for all items.
6. Choose *Post*.
7. Choose until the overview tree appears.

# Converting the Planned Order into a Production Order

8. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Production → MRP → Evaluation → Stock/requirements list* |
| **Transaction Code** | MD04 |

9. Enter the following data:

| Field | Data |
|---|---|
| Material | NC-103 |
| MRP area | 5000 |
| Plant | 5000 |

10. Choose .
11. Double click on *PlOrd.* (Planned Order ) to see the detailed information of the planned order.
12. On the *Stock/Requirements List: Initial Screen dialog box*, choose *->Prod. Ord* to convert the planned order to a production order.
13. On the *Production order Create: Header screen*, choose to release the production order.
14. Choose .

    Note the production order number.
15. Choose until the overview tree appears.

# Goods Receipt for the Production Order

16. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Receipt* → *For Order* |
| **Transaction Code** | MB31 |

17. Enter the following data:

| Field | Data |
|---|---|
| Document date | Today's date |
| Posting date | Today's date |
| Movement Type | 101 |
| Order | Number of your production order |
| Plant | 5000 |

18. Choose .

    The *Goods Receipt for Order: Collective Processing 0001/0001 screen* appears.

19. Choose .

20. Choose until the overview tree appears.

# Creating a Sales Order

18. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Sales and Distribution → Sales → Order → Create* |
| **Transaction Code** | VA01 |

19. On the *Create Sales Order: Initial Screen*, enter the following data:

| Field | Data |
|---|---|
| Order Type | OR |
| Sales organization | 5000 |
| Distribution channel | 10 |
| Division | 00 |

20. Choose .

21. On the *Create Standard Order: Overview* screen, enter the following data:

| Field | Data |
|---|---|
| Sold-to party | 5500 |
| Purch. Order no. | 1 |
| Req.deliv.date | More than 2 weeks in the future |
| Material | NC-103 |
| Order quantity | 1 |

22. Choose to skip all the messages.

23. Scroll right the item list and enter the following data:

| Field | Data |
|---|---|
| WBS element | S-####-NC-103 |

24. Choose .

    Note the sales order number.

25. Choose until the overview tree appears.

# Shipping the Delivery from the Project Stock

26. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Sales and Distribution → Shipping and Transportation → Outbound delivery → Create → Single Document → With Reference to Sales Order* |
| **Transaction Code** | VL01N |

27. Enter the following data:

| Field | Data |
|---|---|
| Shipping Point | 5000 |
| Selection date | Req. delivery date |
| Order | Your sales order number |
| From item | Blank |
| To item | Blank |

28. Choose .

29. On the Delivery Create Overview screen, select *Subsequent function → Create Transfer Order.* Choose *Yes* on the dialog box.

30. On the Create Transfer Order for Delivery Note: Initial Screen, enter the following data:

| Field | Data |
|---|---|
| Warehouse number | 500 |
| Plant | 5000 |
| Delivery | Number defaulted by the system |
| Group | Blank |
| Select items | Select |
| Foreground/backgrnd | System-guided |
| Adopt Pick.quantity | 2 |
| Adopt putaway qty | Blank |
| Putaway TO proc | Blank |

31. Choose .

32. Choose .

    A transfer order for picking the delivery quantities is created. Option 2 (Adopt pick. Quantity) causes goods issue to be posted automatically.

33. Choose until the overview tree appears.

# Repetitive Manufacturing with Planning of Production Lots (SEIBAN)

## Purpose

This process demonstrates production planning by Sales and Operations Planning (SOP), and production execution by repetitive manufacturing.

The first step is to carry out planning in sales and operations planning. Once the plan has been approved, the planning data are transferred to demand management. The product is then produced using repetitive manufacturing. The finished product is received into project stock. It can then be transferred to the material stock and shipped to customers.

You can find more information about this process under [Page 440].

## Prerequisites

If you need to create the necessary starting situation for this process, choose [Page 441].

## Process Flow

You can find the data for this process under [Page 442].

1. Creating a Production Lot [Page 443]
2. Changing the Planning Hierarchy [Page 444]
3. Entering the Planning Quantity in SOP [Page 445]
4. Transferring the Planning Data to Demand Management [Page 447]
5. Executing Project Planning for the Production Lot [Page 449]
6. Converting the Purchase Requisition Into a Purchase Order [Page 450]
7. Goods Receipt for the Purchase Order [Page 451]
8. Creating the Pull List [Page 452]
9. Confirming the Production [Page 453]
10. Transferring the Project Stock [Page 454]

# Additional Process Information

The continuous need to upgrade products and reduce costs, means that in industries such as mechanical engineering and electronics, the production lots of finished products and semi-finished goods need to be planned and produced using different BOMs and routings. Production lots vary due to the use of alternative components or manufacturing processes. You would then need to determine costs for each production lot. For example, you might want to determined the planned and actual costs incurred by a production lot of an assembly before you receive the of the sales order.

To achieve this, you define a production lot for a particular assembly. Starting from the MRP menu, choose *Master data* → *Production lot* → *Create*. When you create the production lot, the system automatically creates a corresponding WBS element, which serves as the number of the production lot. To create an individual BOM for each production lot, use the WBS BOM that you create with reference to the production lot (WBS element). You can also create a routing with reference to the production lot.

The planning, production and cost evaluation are carried out with reference to the number of the production lot. This enables you to evaluate the costs of the different production lots and compare them in the planning stage (before receipt of the sales order).

This type of planning is known as Pre-Planned Seiban in Japan.

# Setting the Prerequisites for this Scenario

## Use

You now start a CATT to set the requirements for this IDES process. This CATT run updates the stocks of the individual materials to the levels required for this scenario.

## Procedure

8. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Tools* → *ABAP Workbench* → *Test* → *Test Workbench* → *CATT* |
| **Transaction Code** | SCEM |

9. On the *CATT: Initial Screen*, enter the following data:

| Field | Data |
|---|---|
| Test case | ZIDES_SEIBANREM |

10. Choose .

    The *CATT - Run Test Case ZIDES_SEIBANREM screen* appears.

11. Select *Backgr. process*.

12. Choose .

13. Choose .

    In the status bar, you see which transactions are being processed.

14. Choose until the overview tree appears.

# Data Used During This Process

| Field | Data |
|---|---|
| Plant | 5000 |
| Material | NC-102 |
| BOM | NC-102 |
| Production version | 0001 |

# Creating a Production Lot

34. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Production* → *MRP* → *Master Data* → *Production Lot* → *Create* |
| **Transaction Code** | MDL1 |

35. Enter the following data:

| Field | Data |
|---|---|
| Production lot | S-####-NC-102 |
| Prod.lot prof. | 5002 |

36. Choose .

37. To skip the warning, choose .

38. Enter the following data:

| Field | Data |
|---|---|
| Description | S-####-NC-102 |
| Material | NC-102 |

39. Choose .

    The system informs you that production lot S-####-NC-102 has been created.

40. Choose until the overview tree appears.

# Changing the Planning Hierarchy

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Production* → *SOP* → *Planning* → *Flexible Planning* → *Master Data* → *Planning Hierarchy* → *Change* |
| **Transaction Code** | MC62 |

2. Enter the following data:

| Field | Data |
|---|---|
| Info structure | S550 |

3. Choose .
4. In the dialog box, enter the following data:

| Field | Data |
|---|---|
| Material | NC-102 |
| Plant | 5000 |

5. Choose .
6. Enter the following data:

| Field | Data |
|---|---|
| WBS element | S-####-NC-102 |
| Aggr.fact. | 1 |
| Proportion (%) | 100 |

7. Choose .
8. If the *Planning Levels* dialog box appears, choose *Only here*.
9. Choose until the overview tree appears.

# Entering the Planning Quantity in SOP

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Production* → *SOP* → *Planning* → *Flexible Planning* → *Planning* → *Change* |
| **Transaction Code** | MC94 |

2. Enter the following data:

| Field | Data |
|---|---|
| Planning type | ZS550 |

3. Choose .

4. On the *Change Plan in Level-by-Level Planning: Initial Screen*, enter the following data:

| Field | Data |
|---|---|
| Material | NC-102 |
| Plant | 5000 |
| WBS element | Empty |

5. On the *Version Selection* screen area, choose *Active version*.

6. Choose .

7. Choose *Settings* → *Choose header info.*

8. In the dialog box, enter the following data:

| Total | Detail | Description |
|---|---|---|
| 1 | Empty | Material |
| 2 | Empty | Plant |
| Empty | 1 | WBS element |

9. Choose .

10. Enter the monthly production quantity for production lot *S-####-NC-102*:

| Field | Data |
|---|---|
| Next month | 100 |
| Two months in the future | 120 |
| Three months in the future | 150 |

11. Choose .

    You can see that the aggregated key figures are calculated based on the default macro.

12. Choose .

13. Choose until the overview tree appears.

# Transferring the Planning Data to Demand Management

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Production* → *SOP* → *Planning* → *Flexible Planning* → *Environment* → *Transfer Planning to Material* |
| **Transaction Code** | MC90 |

2. Enter the following data:

| Field | Data |
|---|---|
| Material | NC-102 |
| Plant | 5000 |
| Info structure | S550 |
| Version | A00 |
| Key figure | PRODU (Production) |
| From | Today |
| To | Three months in the future |
| Invisible transfer | Select |
| Requirements type | Empty |
| Version | 00 |
| Active | Select |

3. Choose *Extras* → *WBS element*.
4. In the *WBS Element* dialog box, enter the following data:

| Field | Data |
|---|---|
| WBS element | S-####-NC-102 |

5. Choose .
6. Choose *Transfer now*.
7. In the dialog box, enter the following data:

| Field | Data |
|---|---|
| Material | NC-102 |
| Plant | 5000 |
| WBS element | S-####-NC-102 |

8. Choose .
9. Choose until you reach the overview tree.

# Executing Project Planning for the Production Lot

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Production → MRP → Planning → Single-Item - Project* |
| **Transaction Code** | MD51 |

2. Enter the following data:

| Field | Data |
|---|---|
| Project def. | S-####-NC-102 |
| WBS element | Empty |
| With hierarchy | Do not select |
| Create purchase.req. | 1 |
| Planning mode | 3 |
| Delivery Schedules | 3 |
| Scheduling | 1 |
| Also plan unchanged components | Select |
| Display results before saving | Do not select |
| Display material list | Select |

3. Choose .
4. If any warning messages appear, choose .
5. To return to the overview tree, choose and .

# Converting the Purchase Requisition Into a Purchase Order

11. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Purchasing* → *Purchase Requisition* → *Follow-On Functions* → *Create Purchase Order* → *Automatically via Purchase Requisition* |
| **Transaction Code** | ME59 |

12. Enter the following data:

| Field | Data |
|---|---|
| Purchasing group | 500 |
| Purchasing organization | 5000 |
| Plant | 5000 |
| Set reqs to "closed" | 1 |
| WBS element | S-####-NC-102 |

Make sure that all other fields are empty.

13. Choose .

You now see that a purchase order has been created.

14. Note this purchase order number.
15. Choose until the overview tree appears.

# Goods Receipt for the Purchase Order

21. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Receipt → For Purchase Order → PO Number Known* |
| **Transaction Code** | MIGO |

22. Enter the following data:

| Field | Data |
|---|---|
| Purchase order | Number of your purchase order |
| Document date | Today's date |
| Posting date | Today's date |

23. Choose .

    The goods receipt for the purchase order is copied into the item overview.

24. You can close the detailed data area at the bottom of the screen by choosing .
25. In the item data area (at the middle of the screen), select *OK* for all of your items.
26. Choose *Post*.
27. Choose until the overview tree appears.

# Creating the Pull List

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Production* → *Repetitive Manufacturing* → *Material Staging* → *Pull List - Trigger Replenishment* |
| **Transaction Code** | MF60 |

2. Enter the following data:

| Field | Data |
|---|---|
| Store.loc.level | Select |
| Plant | 5000 |
| Selection period for reqmts | One month in the future |
| WBS element | S-####-NC-102 |
| Only relevant f.production | Select |

Make sure that all other fields are empty.

3. Choose .
4. Choose .
5. Choose *Replenish. proposals*.
6. Choose .
7. Choose *Replenishment elements*.
8. In the *Replenishment Elements* screen area, choose .
9. Choose *Batch-/Stock Determination*.

The system has determined the storage location.

10. In the *Replenish. Elements* screen area, choose .
11. Choose *Stage*.
12. Choose .
13. Choose until the overview tree appears.

# Confirming the Production

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Production* → *Repetitive Manufacturing* → *Backflush* → *REM Backflush* |
| **Transaction Code** | MFBF |

2. On the *REM Backflush - Transaction Variant: None* screen, choose the *Production by lot* tab page.
3. Enter the following data:

| Field | Data |
|---|---|
| Backflush qty | 10 |
| Posting date | Today |
| Document date | Today |
| Production lot | S-####-NC-102 |
| Plant | 5000 |

   Make sure that all other fields are empty.

4. Choose .

   You see the material and the planned order.

5. Choose .

   The system informs you that the *Goods receipt* for material NC-102 and *the Goods Issue* for the backflushed components have been posted.

6. Choose until you reach the overview tree.
7. To skip any messages that may appear, choose *No*.

# Transferring the Project Stock

1. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Transfer Posting* |
| **Transaction Code** | MB1B |

2. Enter the following data:

| Field | Data |
|---|---|
| Document date | Today's date |
| Posting date | Today's date |
| Movement type | 411 |
| Plant | 5000 |
| Storage location | 5002 |
| Special stock | Q |

Make sure that all other fields are empty.

3. Choose .

4. Enter the following data:

| Field | Data |
|---|---|
| WBS element | S-####-NC-102 |
| Recv. SLoc | 5002 |
| Material | NC-102 |
| Quantity | 10 |

5. Choose .

The system informs you that the transfer posting was successful.

6. Choose .

7. Call up the transaction as follows:

| | |
|---|---|
| **Menu Path** | From the *Inventory Management* node, choose *Environment* → *Stock* → *Stock/Requirements List*. |
| **Transaction Code** | MD04 |

8. On the *Stock/Requirements List: Initial Screen*, enter the following data:

| Field | Data |
|---|---|
| Material | NC-102 |
| MRP area | 5000 |
| Plant | 5000 |

9. Choose .

   Check that the planned independent requirement of production lot S-####-NC-102 has been reduced by 10.

10. Choose until the overview tree appears.